3 PART NO. 2191242 IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PAGE 0001 3 1131 KEYBOARD-PRINTER TEST 1131 KEYBOARD-PRINTER TEST 3. OPERATING PROCEDURE TABLE OF CONTENTS 3.1*** PROGRAM LOADING PAGE PARAGRAPH) STANDARD MONITOR LOADING PROCEDURES APPLY DETAILS. 1. SET FIRST TYPEWRITER TAB 20 CHARACTERS FROM LEFT MARGIN. OPERATING PROCEDURE. 2. SET BIT SWITCH 15 OFF - LOAD AND GO PROGRAM LOADING PROGRAM OPERATION PROGRAM CONTROL - FUNCTION . ROUTINE SELECTION - FUNCTION 1 PROGRAM OPTION 3.2.3 3. LOAD DIAGNOSTIC MONITOR AND KEYBOARD PRINTER TEST. PROGRAM HALTS 3.3 4. SELECT PROGRAM OPTIONS, IF DESIRED. NORMAL HALTS 3-3-1 ***** 3.3.2 ERROR HALTS PROGRAM TERMINATION 3.2*** PROGRAM OPERATION. RESTARTS STANDARD MONITOR OPERATING PROCEDURES APPLY. DETAILS. STATUS MESSAGES ERROR MESSAGES 3.2.1 PROGRAM CONTROL - FUNCTION 0 1. SET SWITCHES 0-7 TO 01. 2. SET SWITCHES 8-15 AS DESIRED. THE PRINTER TEST THE KEYBOARD TEST 5.2 6. APPENDIX) SAMPLE PRINTOUT) 1. PURPOSE THE KEYBOARD PRINTER FUNCTION TEST CHECKS THE OPERATING PERFORMANCE OF THE PRINTER AND KEYBOARD AND AIDS IN THEIR PROPER ADJUSTMENT WHILE BEING) RUN IN OVERLAP WITH OTHER SYSTEM FUNCTIONS. 3. PRESS INT REQ KEY ON CONSOLE. 3 2. PREREQUISITES 3.2.2 ROUTINE SELECTION - FUNCTION 1 THIS PROGRAM MUST RUN UNDER CONTROL OF THE DIAGNOSTIC MONITOR. THE DIAGNOSTIC MONITOR PROGRAM USES 1,500 STORAGE WORDS, AND THIS THE SELECTED ROUTINE WILL LOOP UNTIL A NEW ROUTINE IS SELECTED. PROGRAM USES 1,200 STORAGE WORDS. 3 3 1. TO SET ROUTINE SELECTION A. SET SWITCHES 0-7 TO 41. 3 SET ROUTINE NUMBER IN SWITCHES 12-15 DECCATATION 3 1 3 15N0V66 420317 02JAN66 Olmay66 415490 4154908 3.

3

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THESE PROCEDURES ARE SUMMARIZED HERE. SEE DH USE PROCEDURE FOR

- ON TO SPECIFY OPTIONS BEFORE RUNNING.

IF HALTED AFTER LOADINGS SELECT PROGRAM OPTIONS THEN TURN OFF HALT SWITCH OR FOLLOW NORMAL RESTART PROCEDURE (SECTION 3.5).

THESE PROCEDURES ARE SUMMARIZED HERE. SEE DM USE PROCEDURE FOR

SW	FUNCTION	
8	RESTART	
9	ROUTINE START MESSA	GE
10	LOCK ON FUNCTION	
11	LOOP PROGRAM	
12	LOOP ON ERROR	
13	BYPASS ERROR PRINTO	IUT
14	HALT ON ERROR	
15	HALT	

RIN	DESCRIPTION		
		200	
1	PRINT LAST KEYBOARD ENTRY	•	NORMAL ROUTINES-
2	TAB AND CARRIER RETURN		THE PROGRAM STARTS WITH
3	UPPER CASE CHARACTERS	•	ROUTINE, 1, RUNS EACH
4	LOWER CASE CHARACTERS	•	ROUTINE IN SEQUENCE
5	REGISTRATION	•	THEN TERMINATES AFTER
6	BACKSPACE AND INDEX	•	ROUTINE A.
7	END OF LINE CARRIER RETURN	•	
•	ROCK	. •	
9	TWIST		
A	2011		

420317 415490 4154908 419643

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1131 KEYBOARD-PRINTER TEST

PRINT BIT SWITCH IMAGE . OPTIONAL ROUTINES . MUST BE SELECTED * = REFER TO SECTION 3.2.3 FOR SPECIAL INSTRUCTIONS.

- C. PRESS INT REQ KEY ON CONSOLE.
- 2. TO RESET ROUTINE SELECTION SET AS IF SELECTING ROUTINE ZERO.
- 3.2.3 PRINT FROM BIT SWITCHES

ROUTINE B WILL ALTERNATELY PRINT TWO CHARACTERS SET IN THE BIT SWITCHES. TO SPECIFY THE DESIRED CHARACTERS, SET SWITCH 0-7 AND 8-15 TO THE ROTATE AND TILT CODE FOR THE CHARACTERS. *****

3.3 *** PROGRAM HALTS

3.3.1 NORMAL HALTS

.HALT NO.		DESCRIPTION		RESTART ACTION
3001	PROGRAM	STOP OR ADDRESS STOP	•	PRESS START
3002	HALT ON	ERROR	•	DISPLAY MODE-PRESS START.

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1131 KEYBOARD-PRINTER TEST

3.3.2 ERROR HALTS

HALT NO. (B REG).	DESCRIPTION	RESTART ACTION
30F1	CHECK SUM ERROR ON FIRST	RELOAD
30F2 .	READER DSW ERROR WHEN .	RELOAD
30F3	CARD 2 OF LOADER DID NOT LOAD	RELOAD
30F4	CAN NOT CLEAR CORE - DUE TO . ERROR IN ADDRESSING UPPER . CORE.	
30F5	READER CHECK WHEN LOADING MONITOR OR TEST PROGRAM	NPRO THEN PLACE CARDS RUN OUT IN FRONT OF REMAINING DECK AND PRESS START.
30F6 .	MONITOR DID NOT LOAD	RELOAD
30F7	CHECK SUM WHEN LOADING	RELOAD **
30F8	READER NOT READY	MAKE READER READY
30F9	INVALID INTERRUPT WHICH WILL .	PRESS RESET AND START
30FA	CONSOLE PRINTER HANG UP	

3.4*** PROGRAM TERMINATION

IF LOOP PROGRAM HAS NOT BEEN SPECIFIED THE PROGRAM WILL TERMINATE AT THE END OF ROUTINE 7. ROUTINE 7.4, AND E MILL DNLY RUN SELECTED.

IF ANY ROUTINE IS SELECTED THAT ROUTINE WILL LOOP AND WILL NOT TERMINATE.

420317

3.5*** RESTART

- 1. SET SWITCHES 0-7 TO 01. 2. TURN ON SWITCH 8.
- 3. SET DESIRED CONTROL IN SMITCHES 9-14.

419643

4. PRESS INTERRUPT REQUEST KEY.

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DATE OZJANGG OLMAYGG 1540466 420317 419643 EC NO. 415490 4154908

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1131 KEYBOARD-PRINTER TEST

4. PRINTOUTS

ALL PRINTOUTS ARE IN THE STANDARD FORMAT.

APPNN DORR AAAA

(MESSAGE)

EPPNN OORR AAAA

(MESSAGE)

WHERE

A IDENTIFIES STATUS MESSAGES

E IDENTIFIES ERROR MESSAGES

PP IS THE PID OF THE PROGRAM CAUSING THE MESSAGE

THIS WILL BE EITHER OO FOR MESSAGES ORIGINATED BY THE MONITOR OR O4 FOR MESSAGES ORIGINATED BY TH'S PROGRAM.

NN IS THE MESSAGE SEQUENCE NUMBER
RR IS THE ROUTINE NUMBER
AAAA IS THE ADDRESS OF THE ROUTINE
MESSAGE IS ANY VARIABLE INFORMATION

4.1** STATUS MESSAGES

A0000

NUM PID ADRS RELF LD

THIS MESSAGE IS PRINTED FOLLOWING THE LOADING OF ANY PROGRAM (EXCEPT MONITOR). THE MESSAGE GIVES THE LOAD SEQUENCE NUMBER, THE PROGRAM ID, THE ADDRESS INTO WHICH THE PROGRAM WAS LOADED, AND THE RELOCATION SEATOR

A0001

SWS PID

THIS MESSAGE IS PRINTED EACH TIME A VALID SWITCH ENTRY IS READ BY THE MONITOR. THE MESSAGE CONTAINS THE SWITCH SETTING READ TOGETHER WITH THE PROGRAM ID OF THE PROGRAM INTO WHICH THE CONTENTS OF SWITCHES 8-15 WERE STORED. IF THE SWITCH ENTRY CALLED FOR HALT OF ANY PROGRAM. THE WORD HALT WILL FOLLOW THE MESSAGE.

A0400 OOOR AAAA

ROUTINE START MESSAGE - IF SWITCH 9. FUNCTION 0. IS TURNED ON. THIS MESSAGE WILL BE PRINTED BEFORE THE START OF EACH ROUTINE. R IS THE NUMBER OF THE NEXT ROUTINE AND AAAA IS THE STARTING ADDRESS.

A0401 OOOR AAAA

CONSOLE

A0401 000R AAAA KEYBOARD

THIS MESSAGE INDICATES THE POSITION OF THE CONSOLE/KEYBOARD SWITCH EACH TIME IT IS CHANGED.

4.2*** ERROR MESSAGES

THE DSW IS CHECKED FOR ABSOLUTE CORRECTNESS AT ALL TIMES. IF AN ERROR IS DETECTED ONE OF THE MESSAGES BELOW WILL INDICATE THE PROBLEM. IT IS LEFT TO THE OPERATOR TO ANALYZE THE DSW FOR THE SPECIFIC PROBLEM AREA.

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****************** TYPEWRITER-KEYBOARD DSW TYPEWRITER SERVICE RESPONSE KEYBOARD RESPONSE KEYBOARD REQUEST ON - CONSOLE ENTRY OFF - KEYBOARD TYPEWRITER BUSY TYPEWRITER NOT READY KEYBOARD BUSY NOT USED **********************

E0001

SWS INVLD

THE SETTING OF SWITCHES 4-7 DID NOT EQUAL THE LOAD SEQUENCE NUMBER OF ANY PROGRAM IN CORE.

E0003

OVR CORE

THE PROGRAM WHICH THE LOADER WAS ATTEMPTING TO LOAD EXCEEDED AVAILABLE CORE. LOADING WAS TERMINATED.

E0004

CKSUM

A CHECK SUM ERROR WAS DETECTED WHILE LOADING A TEST PROGRAM. THIS ERROR OCCURS UNDER ANY OF THE FOLLOWING CONDITIONS.

- . A CARD IS MISSING OR IS OUT OF SEQUENCE.
- 2. THERE IS AN EXTRA CARD IN THE DECK.
- 3. THE PUNCHED INFORMATION ON THE CARD IS NOT CORRECT.
- 4. DATA WAS LOST OR PICKED UP DUE TO A MACHINE MALFUNCTION.
- DUE TO A CPU MALFUNCTION, THE CHECK SUM WAS NOT CORRECTLY CALCULATED.

WHEN THIS ERROR OCCURS ATTEMPT TO RELOAD THE PROGRAM.

E0005

OOON XXXX

THIS ERROR WILL OCCUR IS AN INTERRUPT OCCURS, BUT THE ILSM WAS NOT CORRECT. N IS THE INTERRUPT LEVEL AND XXXX IS THE ILSW. THIS PRINTOUT WILL ONLY OCCUR IF THE INTERRUPT IS RESET BY A BOSI. NO ATTEMPT IS MADE BY THE ERROR ROUTINE TO RESET THE REQUEST BIT.

E0401 000R AAAA

XXXX X000

DSW ERROR ON CHECKING FOR READY

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3

E0402 000R AAAA

XXXX XCOO

DSW ERROR IMMEDIATELY AFTER OUTPUT COMMAND.

E0403 OOOR AAAA

XXXX XXOO

INTERRUPT DSW ERROR

E0404 OOOR AAAA

XXXX X000

LOST PRINTER INTERRUPT.

DSW AFTER LAST XIO WRITE COMMAND IS PRINTED

E0405 DOOR AAAA

XXXX

KEYCODE ENTRY ERROR. AN ILLEGAL KEYBOARD CODE HAS BEEN DETECTED.
THE KEYBOARD CODE SHOULD HAVE BEEN AN IMAGE OF CARD HOLERITH. COLS
12 - 9 IN BITS 0-11, RESPECTIVELY.

E0406 OOOR AAAA

XXXX X200

DSW ERROR ON PLACING KEYBOARD IN PROCEED STATUS

E0407 OOOR AAAA

EC ND. 415490

XXXX 0000

DSW ERROR AFTER READ KEYBOARD COMMAND

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4154908

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1131 KEYBOARD-PRINTER TEST

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3

1

1

1

1

- 2

. 3

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1

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3

1

I.

1

1

1

THIS FUNCTION TEST CHECKS THE PROPER OPERATION OF THE PRINTER-KEYBOARD STATUS INDICATORS. THE VARIOUS ROUTINES AID IN DETERMINING THE PROPER ADJUSTMENT OF THE PRINTER.

5.1*** THE PRINTER TEST.

THE PRINTER TEST IS A SERIES OF STANDARD TESTS PERFORMED IN ORDER OF COMPLEXITY. EACH TEST HAS TWO LINES OF DUTPUT (THE FIRST IN BLACK AND THE SECOND IN RED). THE ONLY EXCEPTION IS THE REGISTRATION TEST WHICH HAS ONLY ONE LINE.

- A. THE NORMALLY RUN ROUTINES ARE DONE SEQUENTIALLY AS FOLLOWS.
 - 1. PRINT LAST KEYBOARD ENTRY.
 - 2. CARRIER RETURN AND TABULATE.
 - 3. UPPER CASE CHARACTERS.
 - 4. LOWER CASE CHARACTERS. (SHIFT SIDE OF ELEMENT).
 - 5. REGISTRATION

THIS TEST PRINTS A BLACK "+" ENCLOSED BY A RED "0". IT CHECKS THE BACKSPACE FUNCTION AND THE ALIGNMENT. OF THE PRINT.

6. BACKSPACE, INDEX.

CHECKS TABULATE, BACKSPACE, AND LINE FEED FUNCTIONS.

7. END OF LINE CARRIER RETURN

CHECKS TO SEE THAT THE END OF LINE CARRIER RETURN WORKS PROPERLY.

8. ROCK

TESTS THE TILT MECHANISM BY TYPING CHARACTERS LOCATED ONE AFTER ANOTHER IN VERTICAL COLUMNS ON THE PRINT HEAD.

9. ROLL

TESTS THE ROTATE MECHANISM BY SELECTING CHARACTERS ONE AFTER ANDTHER IN HORIZONTAL BANDS AROUND THE PRINT HEAD.

. TWIST

TESTS THE COMBINED ROTATE AND TILT MECHANISM BY CAUSINGA MAXIMUM ROTATION AND TILT BETWEEN CHARACTERS.

- B. ROUTINES AVAILABLE FOR EXECUTION ON AN OPTIONAL BASIS FOLLOW,
 - B. PRINT BIT SWITCH IMAGE

THE THO CHARACTERS IN THE BIT SHITCHES ARE ALTERNATELY PRINTED.

TO ENTER THIS MODE, ROUTINE B MUST BE SPECIFIED (FCN 1).

5.2*** THE KEYBOARD TEST (ROUTINE C)

THE KEYBOARD TEST IS ENTERED BY SWITCHING THE CONSOLE/KEYBOARD SWITCH TO THE KEYBOARD POSITION.

AT THIS TIME THE OPERATOR MAY ENTER ANY NUMBER OF CHARACTERS. EACH CHARACTER ENTERED IS PRINTED AS IT IS KEYED. IN. WHEN THE CONSOLE/KEYBOARD SWITCH IS RETURNED TO THE CONSOLE POSITION, THE PROGRAM WILL LOOP ON ROUTINE ONE PRINTING THE FIRST 48 CHARACTERS ENTERED VIA THE KEYBOARD. IF NO ENTRY WAS MADE THEN THE PROGRAM COMPLETES THE PRINTER TEST.

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PART NO. 2191242 PAGE 0005 1131 KEYBOARD-PRINTER TEST ALL KEYBOARD KEYS RETAIN THEIR NORMAL USE EXCEPT. FUNCTION CARRIER RETURN
THE NEXT CHARACTER (IF ALPHABETIC)
WILL BE IN LOWER CASE.
LINE FEED ERASE FIELD 0-2-8 DATE 02JAN66 01MAY66 15NDV66 EC ND. 415490 4154908 419643 15JUN67 420317 PROG ID 0304-* 0005 PAGE

IBM MAINTENANCE BIAGNOSTIC PROGRAM FOR THE 1130 SYSTEN PART MO. 2191242 PAGE 5A 1131 KEYBOARD - PRINTER TEST FIGURE 1. STANDAND TESTS PRINTOUTS A0400 0000 CONSOLE CARRIER RETURN TABULATE					
FIGURE 1. STANDARD TESTS PRINTOUTS CONSOLE CARRIER RETURN CARRIER RETURN ABCODEFICHIAKUNDOPORSTUWAXYZ (<<^*);**"!="1:"12" 20" 20" 20" 20" 20" 20" 20" 20" 20" 2	IRM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1	130 SYSTEM		PART NO. 21912	42
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#,\$.1RZ96%OFDMU42SK6@a-08YQHGPX75VNECLT31/JA &!:="ZR1FOW; "UNDBKS+ ?>%HQY'*XPGENV) <tlcaj_(#9642087531="" acegh%bdf1&!romk="" tvxy-suwz,\$romk&qpnljacegh@bdf1.="">QPNLJ_TVXY?SUWZ:=";"+ '*)<(#9642087531/TVXY-SUWZ,\$ROMK&QPNLJACEGH@BDF1. ACEGH%BDF1&!ROMK>QPNLJ_TVXY?SUWZ:=";"+ '*)<(#A,J\$(!<rtzl9c6ewnovf)d*mxup4g2hsqkyb'0 &?->0%8BYKQSH+G"PUXM7D5FVONWE;C"LZTR311&/!J:A= #A,J\$(!<rtzl9c6ewnovf)d*mxup4g2hsqkyb'0 &primtdesignation. ####################################<="" td=""><td>#.\$.IRZ96WOFDMU42SKB@&-08YUHGPX75VNFCLT</td><td>31/JA 6!:="Zf</td><td>LIFOW: TUMDRKS+17>2HO</td><td>(**XPGFNV)(TLCA.L (</td><td>• .</td></rtzl9c6ewnovf)d*mxup4g2hsqkyb'0 &primtdesignation.></rtzl9c6ewnovf)d*mxup4g2hsqkyb'0 &?-></rtzl9c6ewnovf)d*mxup4g2hsqkyb'0 &?-></tlcaj_(>	#.\$.IRZ96WOFDMU42SKB@&-08YUHGPX75VNFCLT	31/JA 6!:="Zf	LIFOW: TUMDRKS+17>2HO	(**XPGFNV)(TLCA.L (• .
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PRINTER CHARACTER CODING

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0 C U 0 1 0 0 1 0 0 0 1 0 0 1 0	P Q R S T	54 64 60 98 90	P Q'R U F	56 66 62 94 9E	00000
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 4 5 6	FC D 8 DC FO F4 DO	4	FE DA CE F2 F6 D2	000000
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DATE 02JANGG 01MAYGG 15NOVGG 1 MAR 67 15 JUN 67 EC NO. 415490 415440B 419643 419643B 420317

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IBM MAIN	TENANCE DIA	GNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. 2191240 PAGE 1	3	IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NG. 2191240 PAGE 1A
1131 KEY	BOARD-PRINT	ER TEST		3 1	1131 KEYBOARD-PRINTER TEST	
*****	****	***************	* 30400030	3		30490710
•••••			30400040	5	• ORG *+1500	30400720 30400730
		* THIS ENGINEERING CHANGE REFLECTS MAJOR * CHANGES TO THE DIAGNOSTIC MONITOR. PREVIOUS	30400050 30400060	"	**************************************	30400740 30400750
		* TESTS WILL NOT RUN WITH DIAGNOSTIC MONITOR II.	30400070 30400080	5	◆ CGNTROLLED ◆	30400760
		* THIS TEST WILL NOT RUN WITH PREVIOUS MONITORS.	30400090 30400100		* 1130 KEYBOARD PRINTER * * FUNCTION TEST. *	30400770 30400780
		* TESTS PRIOR TO EC 419643 DATED NOV 15, 1966 * WILL NOT OPERATE PROPERLY WITH DIAGNOSTIC	30400110 30400120)	**************************************	30400790 30400800
	•	* MONITOR II.	30400130	-,	OSDD O OOOO RID DC O ROUTINE NUMBER OSDE 1 0646 RAD DC GO ROUTINE ADDRESS	30400810 30400820
******	******				05DF 8 0000 SWO DC /0000 FCN 0 - CONTROL	30400830
		* EQUATE TABLE	30400160 30400170	11	05EO 0 0000 SW1 DC 0 FCN 1 - RTN SELECTION 05E1 0 0000 SW2 DC NDT USED	30400840 30400850
		* THIS TABLE EQUATES TEST PROGRAM LABELS	30400180 30400190	!	05E2 0 0000 SW3 DC NDT USED 05E3 1 0646 DC GO LOOP PROGRAM ADDRESS	30400860 30400870
		* TO THEIR EQUIVALENT DIAGNOSTIC MONITOR	30400200)	05E4 1 0646 DC GO INITIALIZE ADDR 05E5 0: 0000 MLSCF DC *-* PROGRAM CONTROL FLD	30400880 30400890
		* ADDRESSES.	30400210 30400220	4	95E6 9 FFFF TERM DC /FFFF TERMINATOR	30400900 30400910
0160 0161		BEGIN EQU /160 BEGIN ROUTINE START EQU BEGIN+1 SUPERVISOR ROUTINE	30400230 30400240			30400920
0 162 0163		ERROR EQU START+1 ERROR LOG ROUTINE LOG EQU ERROR+1 STATUS LOG ROUTINE	30400250 30400260	N. I	PRINTER INTERRUPT ROUTINE *	30400930 30400940
0164		END EQU LOG+1 END ROUTINE	30400270 - 30400280		* THIS ROUTINE CHECKS THE	30400950 30400960
		* MONITOR CONTROL WORD ADDRESSES	30400290 30400300)	 INTERRUPT DSW FOR THE PROPER BITS. 	30400970 30400980
0165		RTHSW EQU END+1 ROUTINE START SWITCH	30400310		* # IF AN ERROR IS DETECTED	30400990 30401000
9 166 0 167		ERLCK EQU END+2 LOCK ON ERROR CONTROL LOGBY EQU END+3 I/O BUSY SW ADR	30400320 30400330		★ THE ERROR IS SAVED IN THE	30401010
0168		RLCF EQU END+4 RELOCATION FACTOR ADR	30400340 - 30400350)	* PRINTER TABLE, PTRO, * AND THE ERROR INDICATOR	30401020 30401030
		* INTERRUPT TRANSFER VECTOR ADDRESSES	30400360 30400370		* IS SET.	30401040 30401050
017A		ILO EQU /17A INTERRUPT LEVEL ZERO	30400380))	THE ERROR WILL BE PRINTED WHEN THE PROGRAM RETURNS	30401060 30401070
018A 019A		IL1 EQU ILO+16 INTERRUPT LEVEL ONE IL2 EQU IL1+16 INTERRUPT LEVEL TWO	30400390 30400400		* TO MAIN LINE.	30401080
O1AA G18A		IL3 EQU IL2+16 INTERRUPT LEVEL THREE IL4 EQU IL3+16 INTERRUPT LEVEL FOUR	30400410 30400420			30401090 30401100
0188 018C		ROTY EQU IL4+1 TYPR SVC REQUEST INTERPT ROKB EQU ROTY+1 KEYBOARD REQUEST INTERPT	30400430 30400440) !	05E7 0 0000 COMIN DC /0000 05E8 01 67000A26 LDX L3 PTRO	30401110 30401120
018D		SVKB EQU RQKB+1 KEYEDARD SERVICE INTERPT	30400450		* OSEA 01 D400063D STO L DSWIT SAVE DSW	30401130 30401140
		•	30400470))	*********************	30401150 30401160
•			30400480 30400490	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	05EC 0 18DE RTE 30	30401170
		* TABLE OF INDEXES FOR REFERENCE * TO PRINTER STATUS TABLES	30400500 30400510	!	05ED 01 4C280603 BSC L KBDRO++Z BR IF KBD RQST INTRPT 05EF 0 18D2 RTE 18 PLACE DSW IN Q	30401180 30401190
		* INDEX REG 3 ALWAYS HAS THE ADDR	3040052 0 3040053 0		05F0 0 C302 LD 3 STS FETCH PRINTER STATUS 05F1 01 940007CF S L KF000	30401200 30401210
		OF THE PRINTER TABLE PTRO	30400540 30400550		05F3 01 4C18062A BSC L KBDSV,+- BR 1F S/B KBD SVC 1NT 05F5 0 C302 LD 3 STS FETCH PRINTER STATUS	30401220 30401230
			30400560		05F6 01 94000844 S L KEOOO 05F8 01 4C2805FD BSC L COMI3,+Z BR IF S/NB TYPR SVC INT	30401240 30401250
00 00 00 0 1		ADR EQU O RTN EQU 1	30400570 30400580	× 1	OSFA O 4808 BSC + SKIP IF NOT KBD RTN	30401260
00 0 2 0003		STS EQU 2 Dut equ 3	30400590 30400600	1	05FB 0 C040 LD KAOOO SELECT KEYBOARD NEXT 05FC 0 7021 MDX TYPSV CHECK TYPR SVC INT	30401270 30401280
0004 0005		ITR EQU 4 SLT EQU 5	3040061 0 3040062 0)	OSFD O CO3E COMI3 LD KAOOO SELECT KEYBOARD NEXT	30401290 30401300
9006	-	NDS EQU 6 PAD EQU 7	30400630 30400640		05FE 0 D302 STO 3 STS 05FF 0 C03D LD DSWIT SAVE SPURRIOUS INT ERR	30401310 30401320
0007 0008		WRT EQU 6	30400650		0690 01 E4000774 AND L KCNSL	30401330
000A 000 C		PTR EQU 10 SNR EQU 12	30400660 30400670)		30401340 30401350
9919		KEY EQU 14 See equ 16	30400680 30400690	•	THE USE OF THE KEYBOARD HAS BEEN REQUESTED BY	30401360 30401370
0012		ERR EQU 18	30400703	5 5	THE INTERRUPT REQUEST KEY	20401380
D475	62 tAP44	15N0Y66 15JUN67	PROG ID 0304-2		DATE 02JAN66 15NOV66 15JUN67	PROG ID 0304-2
DATE EC NO.	02JAN66 415490	419643 420317	PAGE 1	. 	EC ND. 415490 419643 420317	PAGE 1A

EC NO.

415490

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419643

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

1131 KEYBOARD-PRINTER TEST

PART NO. 2191240 PAGE 2A

064	5 1	05DC		DC		PID		30402
064	, i	UJUC	****		***		*******	30402
								30402
							*****	30402
			*					30402
			A			INIT	AL PROGRAM ENTRY *	30402
						1911	POINT *	30402
							PUINI	30402
					'			30402
			*****			*****	*****************************	30402
			•			CIRCT	CET TO BRINT CH CTC	30402
		6C000A		STX		FIRST	SET TO PRINT SW STS	30402
	-	6C000A		STX	ΓO	PTRO+STS	05557 4 000 074 1	
	A O	1010		SLA		16	RESET LOOP RTN 1	30402 30402
		040008		STO.		ANY+3		30402
		D400064		STO	L	ERIND		30402
		D400051		STO	Ļ	RID		30402
		C400051	,	LD	L	SW1		
	3 0	1801		RTE		į	the state of the s	30402 30402
	4 0	4820		BSC		Z		
	5 0	1081		SLT		1		30402
065	6 0	D40005		STO	L	SW1		30402
			₹				**************************************	30402
		6500FF		LDX		-1	TERMINATE KBD INPUT	30402
065	A O	600008		STX	LI	ANY+2		30402
			*					30402
		67000A		LDX		PTRO	INTR PTR STATUS TABL	30402
	_	L C40008		LD	L			30402
	0 0	D304		STO	-	ITR		30402
	1 0	D305		STO	3	SLT		30402
	2 0	1801		SRA	_	1		30402
	3 0	D306		STO		NOS		30402
066	4 0	D307		STO	3	PAD		30402
			*		_	26	*******	30402
	5 0	63E7		LDX		-25	INITIALIZE KEYBOARD	30402
		6F0007	•	-		WRDCT+1	INPUT TABLE	30402 30402
	8 0	6300		LDX	_	O CL THD		30402
		6F0C07		STX	LS	SLTWD		
066	B O	7000		MDX		PRCON	******	30402
			****				*****	30402 30402
			****	****		*****		30402
						BOUT	INE CONTROLLER	30402
						KUUT	INE CONTROLLER	30402
			T			THIC	ROUTINE CONTROLS THE	30402
			-					30402
			#				CUTION OF ALL PRINTER KEYBOARD ROUTINES.	30402
			-			ANU	MEIDUNKU KUUIIMES.	30402 30402
			-			1E 41	IC POUTING TIMES OUT	30402 30402
			#		,		HIS ROUTINE TIMES OUT	30402
			-					
			T				RRUPT FROM THE PRINTER	30402
			=			AN E	RROR WILL BE PRINTED.	30402
			.			T.15 4	FOURNCING OF POUTINGS	30402
							EQUENCING OF ROUTINES	30402
			*				CONTROLLED BY THE MARK	30402
							TINE WHICH BUILDS THE	30402
			*			CHAP	RACTERS TO BE PRINTED.	30402
								30402
		COD3	PRCON		-	ERIND		30402
066	0	402007		BSC	L	INERR,Z	BR IF ERROR INDICATO	30402
								30402
		C400051	, , , ,	LD	L	RID	FETCH ROUTINE NUMBER	30402
		90CF		S		TWLVE		30402
067	2 0	44180A	, .	BSI	L	SWSET++-	CHECK SWS IF KBD RTN	30402
			•					

DATE 02JAN66 15N0V66 15JUN67 EC NO. 415490 419643 420317

LDX L3 PTRO

LD

STO

3 STS

BSC L EXEC3.-

RESTO

0674 01 67000A26

0678 01 4C10068D

0676 0 C302

0677 0 D025

PROG ID 0304-2 PAGE 2A

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FETCH PRINTER STATUS

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IBM MAINTENANCE DIA	GNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. 2191240 PAGE 3	· · · · · · · · · · · · · · · · · · ·	IBM MAINTENANCE DIA	GNOSTIC PROGRAM FOR THE 1130 SYSTEM
1131 KEYBOARD-PRINT	LA TEST		y ; y	1131 KEYBOARD-PRINT	FR TEST
1131 KETOUAKU-PRIMI	r 1631				
			\ \ \ \ \ \ \ \		•
		30402750	. !	06AC 0 6B09	STX 3 MARKU+1 SAVE IX
	•	30402760 30402770		06AD 0 C006 06AE 01 D40005E5	LD MARKT SET MLSCF Sto L MLSCF *
	* WHEN STS IS,	30402780		06B0 00 6C000165	STX L RTNSH SET RTN SH
	ZERO-POS GO SERVICE PTR	30402790 30402800	1	0682 00 44800161 0684 1 0685	BSI I START GD TO START MARKT DC MARKU
· · · · · · · · · · · · · · · · · · ·	* NEGATIVE,	30402810	•	0685 00 67000000	MARKU LDX L3 0 RESTORE IX
	* A000 SELECT_KBD * C000 READ_KBD_NEXT	30402820 30402830	,	06B7 01 0C000A3A	* XIO L RDBS READ BIT SWI
	★ FC00-FFFE COUNT FDR INT	30402840	ŧ	0689 01 C4000A3C	LD L BITSW
	FFFF LOST INT ERR E000 WAIT TYPWR INT	30402850 30402860	1	06BB 00 65000000 06BD 0 1100	MARK1 LDX L1 /0000 FETCH SHIFT
	# FOOO WAIT KED INT	30402870		06BE 0 1806	SRA 8
	* 8000 IGNORE	30402880 30402890		06BF 0 F0DC 06C0 0 4820	EOR I BSC Z SKIP IF ILLE
067A 0 1001	SLA 1	30402900		OGC1 0 FODA	EOR I
067B 01 4C180876 067D 0 180C	BSC L TYEND,+ BR IF END PROGRAM SRA 12	30402910 30402920	•,	06C2 0 1008 06C3 0 D3O3	SLA 8 Sto 3 Out
067E 01 4C040688	BSC L SVC,E BR IF WAIT KUD INT	30402930		06C4 0 COF7	LD MARK1+1 RESET SHIFT
0680 0 1802 0681 0 901D	SRA 2 S KOOO1	30402940 30402950	1	06C5 0 4830 06C6 0 6100	BSC -Z LDX - 1 0
0682 01 4C180781	BSC L SELC2++- BR IF SELECT KBD	30402960		0667 0 4808	BSC + A A A A A A A A A A A A A A A A A A
0684 0 901A 0685 01 4C1807A3	S KOOO1 BSC L KEYBD.+- BR IF READ KEYBD	30 402970 30 402980		06C8 0 6108 06C9 0 69F2	STX 1 MARK1+1
0687 0 700E	MDX EXEC9 IGNORE OR WAIT	30402990	i	06CA 0 70CB	MDX EXEC9
0688 01 74010A28	SVC MDX L PTRO+STS,1 COUNT DOWN FOR INT	30403000 30403010			
068A 0 700B	MDX EXEC9 WAIT FOR INTRPT BSC L NOIN PRINT NO INTRPT ERROR	30403020 30403030		06CB 01 4C000876	MARK2 BSC L TYEND END PROGRAM
068B 01 4C000775	\$ BSC E NOTA PRINT NO THINK! ENNOR	30403040		06CD 0 7201	MARKS MDX 2 1
0685 01 44000A3D 068F 0 COOE	EXEC3 BS1 L SWSET CK CON/KBD SW SETTING LD KF800 SERVICE PRINTER	30403050 30403060		06CE 01 6E000A27 06D0 01 D40005DD	MARK4 STX L2 PTRO+RTN STO L RID SAVE THE ROU
0690 0 D302	STO 3 STS UPDATE PTR STATUS	30403070		0000 01 04000000	
0691 01 40000736	BSC L READY	30403080 30403090		06D2 01 6E8006E6	STX I2 MARKL+1
0693 0 C009	EXECT LD RESTO RESTORE TO TRY LATER	30403100		06D4 01 C680084D	LD 12 FUNR-1 FETCH ADRS O
0694 01 D4030A28 0696 01 6500066C	STO L PTRO+STS EXEC9 LDX L1 PRCON TRY AGAIN - LATER	30403110 30403120		06D6 0 D304	STO 3 ITR
0698 01 6D000555	STX L1 MLSCF	304031 30) '	06D7 0 1810	SRA 16 RESTORE WORD
069A 00 44800161	BSI I START	30403140 304031 50		06D8 0 D307	STO 3 PAD
069C 0 0001	1 DC 1	30403160 30403170	;)	06D9 01 C600084D	MARK5 LD L2 FUNR-1 RESTORE TEST BSC L MARK2,Z+ BR IF PTR FI
069D 0 0000 069E 0 F800	RESTO DC /0000 KF800 DC /F800	30403180		06DB 01 4C2806CB	
069F 0 0001	K0001 DC /0001 CONSTANT	30403190		06DD 0 8307	A 3 PAD Sto 3 Adr
	***************	30403200 30403210		06DE 0 D300	•
		30403220 30403230	. ' '	06DF 0 1810 06E0 0 D306	SRA 16 RESTORE WORD STO 3 NOS
	THIS ROUTINE BUILDS THE	30403240	5 5		• • · · · · · · · · · · · · · · · · · ·
	NEXT CHARACTER TO BE PRINTED. THE CHARACTER	30403250 30403260))	06E1 0 COBA 06E2 0 D305	LD 1 RESTORE SHIF
	IS FETCHED FROM THE	30403270			
The state of the s	PROPER ROUTINE TABLE OR TIS TAKEN FROM THE BIT SWS.	30403280 30403290	' '	06E3 01 65800A26 06E5 01 66800A27	MARKG LDX II PTRO+ADR MARKL LDX I2 PTRO+RTN
and the second second second	A CONTINE WHICH IS DIRECTOR	30403300)]]	06E7 0 6916	STX 1 MARKP+1 SAVE IXING
	* A ROUTINE WHICH IS RUNNING * WILL NOT TERMINATE UNTIL	30403310 30403320		06E8 0 6A17 06E9 0 6B18	STX 3 MARKR+1 *
	* IT HAS BEEN COMPLETED.	30403330 30403340		06EA 01 C4000A27 06EC 01 F40005DD	LD L PTRO+RTN GET RTN EOR L RID HAS IT CHANG
06A0 01 C40005E0	MARK LD L SW1	30403350	'	06EE 01 4C1806FD	BSC L MARKP++- NO
06A2 0 100C 06A3 0 180C	SLA 12 SRA 12	30403360 30403370	٦	06F0 01 C4000A27 06F2 01 D40005DD	LD L PTRO+RTN SET RTN STO L RID *
06A4 01 9400084D	S L ELVEN IS TYPE SWS ROUTINE	30403380		06F4 00 6C000165	STX L RTNSW SET SWITCH
06A6 01 4C2006E3	BSC L MARKG, Z BR IF NO	30403390 30403400	-	06F6 01 C40006FC 06F8 01 D40005E5	LD L MARKZ SET MLSCF STO L MLSCF *
06A8 01 C400084D	LD L ELVEN SET ROUTINE ID	30403410		06FA 00 44800161	BSI I START GO TO START
06AA 01 D40005DD	STO L RID	30403420		06FC 1 06FD	MARKZ DC MARKP
		2000 10 2001 5		DATE DO LANGE	15NOV44 15 HM47
DATE 02JAN66 EC NO. 415490	15NDV66 15JUN67 419643 420317	PROG ID 0304-2 Page 3	1 2	DATE 02JAN66 EC ND. 415490	15NDV66 15JUN67 419643 420317

IBM MAINTENANCE DIA	GNOSTIC PROGRAM FOR	THE 1130 SYSTEM	PART NO. 2191240 PAGE 3A
1131 KEYBOARD-PRINT	ER TEST		
06AC 0 6B09	STX 3 MARKU	+1 SAVE IX	30403430
06AD 0 C006	LD MARKT	SET MLSCF	30403440
06AE 01 D40005E5	STO L MLSCF		30403450
06B0 00 6C000165	STX L RTNSW		30403460 30403470
0682 00 44800161 0684 1 0685	BSI I START MARKT DC MARKU		30403480
0684 1 0685 0685 00 67000000	MARKU LDX L3 0	RESTORE IX	30403490
0000 00 01000000	*		30403500
0687 01 0C000A3A	XIO L RDBS	READ BIT SWITCHES	30403510
0689 01 C4000A3C	LD L BITSW		30403520
06BB 00 65000000	MARK1 LDX L1 /0000	FETCH SHIFT COUNT	30403530 30403540
06BD 0 1100	SLA 1 0 SRA 8		30403540 304035 50
06BE 0 1806 06BF 0 FODC	SRA 8 EDR I		30403560
06C0 0 482 0	BSC Z	SKIP IF ILLEGAL CODE	30403570
OGC1 O FODA	EOR I		30403580
06C2 0 1008	SLA 8		30403590
06C3 0 D3O3	STO 3 OUT	v	30403600
06C4 0 COF7	LD MARKI	+1 RESET SHIFT COUNT	30403610 30403620
06C5 0 4830 06C6 0 6100	BSC -Z LDX 1 0		30403630
0607 0 4808	BSC +		30403640
0608 0 6108	LDX 1 8		30403650
06C9 0 69F2	STX 1 MARK1	+1	30403660
06CA 0 70CB	MDX EXEC9	•	30403670
	•		30403680 30403690
06CB 01 4C000876	MARK2 BSC L TYEND	END PROGRAM	30403700
0608 01 40000878	#	END PROGRAM	30403710
06CD 0 7201	MARKS MDX 2 1		30403720
06CE 01 6E000A27	MARK4 STX L2 PTRO+	RTN	30403730
06D0 01 D40005DD	STO L RID	SAVE THE ROUTINE NO	30403740
	*		30403750
06D2 01 6E8006E6	STX 12 MARKL	+1	30403760 30403770
06D4 01 C680084D	LD 12 FUNR-	1 FETCH ADRS OF TEST	30403780
06D6 0 D304	STD 3 ITR	1 I LICH ADRO DI ILOI	30403790
			30403800
06D7 0 1810	SRA 16	RESTORE WORDS PT	30403810
06D8 0 D307	STO 3 PAD		30403820
	*		30403830
06D9 01 C600084D 06DB 01 4C2806CB	MARK5 LD L2 FUNR- BSC L MARK2	-	30403840 30403850
0000 01 40200000	*	The state of the s	30403860
06DD 0 8307	A 3 PAD		30403870
06DE 0 D300	STO 3 ADR		30403880
	*	2555225 40225 2270	30403890
06DF 0 1810	SRA 16 STO 3 NOS	RESTORE WORDS PRTD	30403900 30403910
06E0 0 D306	STO 3 NOS		30403920
OGEL O COBA	LD I	RESTORE SHIFT WORD	30403930
06E2 0 D305	STO 3 SLT		30403940
	•		30403950
06E3 01 65800A26	MARKG LDX II PTRO+	· · = · ·	30403960
06E5 01 66800A27	MARKL LDX I2 PTRO+		30403970 30403980
06E7 0 6916 06E8 0 6A17	STX 1 MARKP STX 2 MARKQ	=	30403990
06E9 0 6B18	STX 3 MARKR		30404000
06EA 01 C4000A27	LD L PTRO+	-	30404010
06EC 01 F40005DD	EOR L RID	HAS IT CHANGED	30404020
06EE 01 4C1806FD	BSC L MARKP		30404030
06F0 01 C4000A27	LD L PTRO+	RTN SET RTN	30404040 30404050
06F2 01 D40005DD 06F4 00 6C000165	STO L RID STX L RTMSW	SET SWITCH	30404050 30404060
06F6 01 C40006FC	STX L RTNSW LD L MARKZ		30404070
06F8 01 D40005E5	STO L MLSCF		30404080
06FA 00 44800161	BSI I START	GO TO START	30404090
06FC 1 06FD	MARKZ DC MARKP		30404100

PROG ID

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1131 KEYBOARD-PRINTER TEST

1131 KEYBOARD-PRINTER TEST

	02JAN66 15NDV 415490 41 96 43		UN67 317		PROG ID PAGE	0
			PRIN IF T WHEN THE	ROUTINE CHECKS IF THE ITER CAN BE USED AND HE PRINTER IS READY. LOGBY INDICATES THAT PRINTER IS LOGICALLY BUSY, THE DSW IS	30404720 30404730 30404740 30404750 30404760 30404770 30404780	
0734 0 00 0735 0 00		DC DC	/000F	ALL TYPEWRITER RTNS	30404670 30404680 30404690 30404700 30404710	
	- 0 +++++ +++++ +	******	*********	*************	30404630 30404640 30404650 30404660	
	000001 MARKE 9A +	MDX L2	MARK4		30404590 30404600 30404610 30404620	
072F 01 4C	05 3006CD	STO S BSC L	MARKE+1 ALL MARK3,-2	BR IF RTN TOO LARGE	30404550 30404560 30404570 30404580	
0728 01 C4 072A 0 E0 072B 01 4C	0005E0 0a	LD L AND BSC L	SW1 BASIC MARK3,+-	ASSURE PROPER ENTRY BR IF NO RTN SELECT	30404520 30404530 30404540	
0722 0 C1 0723 0 D3 0724 01 F4 0726 01 4C	04 0005E6		1 ITR TERM MARK5,Z	FETCH NEXT REPEAT CT	30404480 30404490 30404500 30404510	
071F 0 D3 0720 0 83	06 07 07	STO 3	NOS PAD PAD		30404440 30404450 30404460 30404470	
071A 01 4C 071C 0 C3 071D 01 84	06	BSC L	MARK5,Z NOS	BR 1F NO DO AGAIN UPDATE MODIFIER WORD	30404400 30404410 30404420 30404430	
0717 01 94 0719 0 D3	04	S L STO 3	ITR I ITR	DECREMENT ITCHT	30404370 30404380 30404390	
0713 0 F0 0714 01 4C	5C 200696	EOR BSC L	KFF00 EXEC9.Z	BR IF NOT END OF FCN	30404330 30404340 30404350 30404360	
0711 0 10	00 08 * 03 Markn	SLA	0 8 OUT	FETCH DUTPUT CHAR SHIFT IT SAVE NEXT DUTPUT WD	30404290 30404300 30404310 30404320	
070D 0 71 070E 01 6D		MDX 1 STX II	1 MARKG+1		30404260 30404270 30404280	
	90	A .	NOS I NOS	BUMP WORDS BY ONE	30404220 30404230 30404240 30404250	
0706 01 4C 0708 0 C1 0709 0 70		BSC L LD 1 MDX	MARKS+E 1 Markn	SHIFT IF ODD FETCH OUTPUT WORD	30404180 30404190 30404200 30404210	
0703 0 C3 0704 0 80 0705 0 D3	97	Ā	SLT I SLT	BUMP SFF WT BY ONE	30404140 30404150 30404160 30404170	
06FD 00 65 06FF 00 66 0701 00 67	000000 MARKQ	LDX L2	0	RESTORE IXING	30404110 30404120 30404130	

		variable.						
			•			CHE	CKED FOR READY.	30404790
			•					30404800
	0736 00	C4800167	READY	LD	1	LOGBY		30404810
5	0738 01	4C20074C		BSC	L	RDY2,Z	BR IF NO TYPE NOW	30404820
			*					30404830
		650005E7		LDX	Ll	COMIN	SET INT VECTOR	30404840
		6D0001BB		STX		ROTY		30404850
٠,		67000A26		LDX	L3	PTRO		30404860
٠,	0740 0	1040		SLT		32		30404870
					_		CENCE DECEMBEL	30404880
	0741 0	OBOA		XIO	3	PTR	SENSE - RESET DSW	30404890 30404900
	0742 0	DOSC		STO		DSWAS		30404910
	0743 0	E02F 4C180750		AND		KEFFF TYPIT,+-	BR IF DSW OK	30404920
	0746 0	C828		BSC	L	DSWAS	DK IF DSW DK	30404930
	0747 0	E02C		AND	•	KCNSL .		30404940
	0748 0	1800		RTE		16		30404950
	0.40	,	•				and the second s	30404960
	0749 đ	6101	•	LDX	1	1	ERROR - NOT READY	30404970
		44000833		BSI	L	PRDSW	PRINT THE ERROR MSG	30404980
		65000736	RDY2	LDX	_	READY		30404990
		4C000840		BSC	Ĺ	PDSWX		30405000
					_	Section 1		30405010
			1 a 🛊 1 a 1			2.5	PRINT ONE CHARACTER	30405020
								30405030
			•			THIS	ROUTINE PRINTS ONE	30405040
			•			CHA	RACTER ON THE CONSOLE	30405050
							NTER AND THEN CHECKS	30405060
			*				THE PRINTER BECAME	30405070
			*				Y-NOT READY BY THE	30405080
			*			OUT	PUT COMMAND.	30405090
			*	·			DOTAL CHARACTER	30405100
	0750 0	0808	TYPIT			WRT	PRINT CHARACTER	30405110
	0751 0	OBOA		XIO	5	PTR	SENSE - RESET DSW	30405120 30405130
	0752 0	DOTA		STO		DSWBY		30405140
			Ī			CHE	CK BUSY DSW	30405150
	0753 0	E01F	•	AND		KEFFF	.cr 5031 53#	30405160
	0754 0	F019		EOR		KOCOO		30405170
		4C1806A0	BSYOK		L	MARK+-	BR 1F DSW DK	30405160
								30405190
	0757 0	C815		LDD		DSWBY		30405200
	0758 0	E018		AND		KCNSL		30405210
	0759 0	E814		OR		KOCOO		30405220
	075A 0	18D0		RTE		16		30405230
	075B 0	6102		LDX	1	2		30405240
	0750 01			BSI	L	PRDSW	PRINT THE ERROR MSG	30405250
	075E 0	70F6		MDX		BSYOK		30405260
			***	****	***	*******	*********	30405270
								30405280
						. PRIN	IT INTERRUPT DSW ERROR	30405290
		1040	-				00000 0000	30405300
	075F 0	1040	INERR			32	RESET ERROR IND	30405310
	0.90 01	D4000640	•	STO	L	ERIND		30405320
	0742 01	CC000A3B	•			ERR+PTRO	FETCH THE ERROR MESG	30405330
	0764 0			LDX	_		SET MSG ID - 3	30405340 30405350
		44000833		BSI		PRDSW	PRINT THE ERROR MSG	30405360
	0767 0			SLT	•	32	THE ENDON MAD	30405370
	0768 0			STD	- 3	ERR	RESET ERROR IND	30405380
		4C00066C		BSC		PRCON	RETURN TO MAIN LINE	30405390
			****				*******	30405400
			• :					30405410
			• 15					30405420
	076C	0001	1.0	BSS	, E	1		30405430
	076D 0	0000	DSWBY	DC		/0000	LAST BUSY DSW	30405440
	076E 0	0000	KOCOO			/0000	BUSY DSW S/B	30405450
	076F 0	0000	DSWAS	DC		/0000	LAST READY DSW	30405460
	1.00	10 miles 10 miles (12 miles 12 miles 1	* 1.					
	DATE	02JAN66	1 6404	44	16.	INA 7		8800 15
	EC NO.		15NOV			UN67	en e	PROG ID
	CO MUS	7.2770	~ L 70~		764	- · ·		FAVE

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BM MAINTENANCI	DIAGNOSTIC P	OGRAM FOR THE	1130 SYSTEM	PART NO.	
				PAGE	5
31 KEYBOARD-I	RINTER TEST				
					* •
70 0 FF00	KFF00 DC	/FF00	CONSTANT	30405470	
71 0 0000	DSWBS DC	/0000		30405480	
72 0 0200	FOZOO DC KEFFF DC	/0200	MASK CONSOLE SH	30405490 30405500	
73 0 EFFF 74 0 1000	KCNSL DC	/EFFF /1000	MASK CONSULE 38	30405 510	
.4 0 1000	******	*******	********	30405520	
	•			30405530	
	•			30405540	
		PRINT	NO INTERRUPT ERROR	30405550 30405560	
75 O OBOA	NDIN XI	3 PTR	SENSE - RESET DSW	30405570	
6 O DOFA	ST	-	SENSE - KESET DON	30405580	
7 0 C8F9	LD			30405590	
78 0 EOFB	ANI	KCNSL		30405600	
79 01 EC0006		L K8000		30405610	
78 0 18D0	RT	-	E0000 - 4	30405620 30405630	
IC 9 6104 ID 01 440008	LD: 33 BS	_	ERROR - 4 FRINT THE ERROR MSG	304056 40	•
F 01 40006			TRINI THE ERROR HOS	30405650	
	****		*******************************	30405660	•
	*			30405670	
	•	KEYBO	DARD TEST	30405680	
				30405690	
	*	CE1 EC	T KEYBOARD ROUTINE	30405700 30405710	
		JELEV	I KEIBUARD ROOTIAL	30405720	
81 01 660005	E7 SELC2 LD	K L2 COMIN.	RESET INT XFR VECTOR	30405730	
3 00 6E0001			FOR KEYBOARD REQ	30405740	
5 00 6E0001		K L2 SVKB	AND SVC KEYBOARD	30405750	
			CENCE AND SAVE DOU	3040 <i>5</i> 7 60 3040 <i>5</i> 770	
87 0 OBOA 88 0 DOE6	XI ST		SENSE AND SAVE DSW	30405780	
00 0 0000	*	D DJWAJ		30405790	
89 0 CO45	LD	KF000	RESET PTR STATUS	30405800	
8A 0 D302	ST	3 STS		30405810	
8B 0 C8E3	LD			30405820	
8C 0 E0E6	AN		08 15 054 OV	30405830	
8D 01 4C1807 8F 0 CODF	93 850 LD	C L SELC++- DSW1S	BR IF DSW OK	30405840 304058 5 0	
90 0 E0E3	AN			30405860	
91 0 6101	LD		ERROR - 1	30405870	
92 0 70 0 8	MD	K SELC1	PRINT DSW ERROR	30405880	
				30405890	
93 0 0B0E	SELC XI		SELECT KEYBOARD Sense - Reset DSW	30405900 30405910	
94 O OBOA 95 O DODB	XII ST		SEMSE - KESEL DS#	30405920	
96 0 FODB	EO			30405930	1
97 O EODB	AN			30405940	
98 01 4C1806	SC BS	C L PRCON++-	BR IF DSW OK	30405950	
	* .			30405 960	
PA 0 C8D6	LDI		. PRINT DSW ERROR	30405970	
98 9 EOD8 9C 0 E8D5	AN: Or			30405980 30405990	
9D 0 6106	LD		ERROR - 6	30406000	
	*	· · · · · · · · · · · · · · · · · · ·		30406010	
E 0 18D0	SELC1 RT			30406020	
F 01 440008		I L PROSW	PRINT THE ERROR MSG	30406030	
11 01 640006		K L EXECT	TRY AGAIN - LATER	30406040	
	*******			30406050 30406060	
	•	DECOL	DE CHARACTER KEYED IN	30406070	
-	8	5.00		30406080	
	•			30406090	
A3 0 OB10	KEYBD XI		READ AND SAVE CHAR	30406100	
A4 0 080A	XI		SENSE - RESET DSW	30406110	
A5 0 10A 0 A6 01 4C1807	SL AR RS			30406120 30406130	
AB 0 401807	AB BS LD		ERROR - 7	30406140	
TE OZJA		15JUN67		PROG ID	0304-2
: NO. 4154	90 419643	420317		PAGE	5

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PART NO. 2191240 PAGE 5A

131	KEYE	DARD-	PRINTER	TEST
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02JAN66

07A9 01 44000833	B:	SI L	PRDSW	PRINT DSW ERROR - 7	30406150
					30406160
07AB 00 66000000	WRDCT L	DX F5	/0000	· · · · · · · · · · · · · · · · · · ·	30406170
07AD 0 61BF			-65	LOOK UP CHAR IN TABLE	30406180
07AE 01 C50008B9	CNVRT LI		KECOD+65		30406190
0780 0 F30E			KEY		30406200
07B1 01 4C1807D0		SC L	CMPRE++-	BR IF CHAR MATCHES	30406210
0783 0 7101		DX 1			30406220
0784 0 70F9	MI.	DX	CNVRT		30406230
					30406240
0785 0 C30E	LI		KEY		30406250
0786 0 F011		DR	NCAP	DO TE NO CAD MEYT	30406260 30406270
07B7 01 4C1807C5		SC L	NOCP++-	BR IF NO CAP NEXT	30406280
2222 0 5005	*		EDEL 6	•	30406290
0789 0 COOF 078A 0 F30E	Li		ERSLC KEY		30406300
078A 0 F30E 078B 01 4C1807F9		-	ERSE,+-	BR IF ERASE LAST CHR	30406310
0199 01 40180154		SC L	EK2E14-	DK IF ERASE LAST ONK	30406320
078D 6 6201	· ·	DX 2	1	SET MODIFIER WORD COUNT	30406330
078E 01 6E000847			EMESG+2	SET HODITIER WORD COOK!	30406340
0182 01 82000841	*		EUCAGAE		30406350
07CO 0 6105		DX 1	5	ERROR 5	30406360
07C1 0 C30E	:		KEY	KB READ ERROR WORD	30406370
0702 01 44000833		SI L	PRDSW	PRINT THE ERROR MSG	30406380
07C4 0 70BC		DX	SELC2		30406390
					30406400
0705 0 6801	NOCP S	TX 0	LOWER		30406410
07C6 0 70BA		DX	SELCZ		30406420
	****	****	*****		30406430
					30406440
	*				30406450
0767 0 0000	LOWER D	C	/0000	= 0 IF NEXT UPR CASE	30406460
0708 0 0002	NCAP D	C	/0002	ERASE FIELD KEY CODE	30406470
0709 0 0004	ERSLC D		/0004	BACKSPACE KEY CODE	30406480
07CA 0 0000	SLTWD D	-	/0000	KEYBOARD SHIFT WORD	30406490
O7CB O FFE7	KFFE7 D		-25		30406500
07CC 0 0000	ERSEA D		/0000		30406510
07CD 0 1111	BSPSE D		/1111	BACK SPACE	30406520
07CE 0 0008	K0008 D		/0008	•	30406530
07CF 0 F000	KFOOO D		/F000		30406540
	****	****	********	******	30406550 30406560
				CHAR MENER IN	30406570
			PLACE	E CHAR KEYED IN OUTPUT TABLE	30406580
	•			UUIPUI IABLE	30406590
07D0 01 C50008FA	CMPRE LI	n 11	TYCOD+65	FETCH PRINTER CHAR	30406600
07D2 01 740007C7			LOWER.0	SKIP IF UPPER CASE	30406610
07D4 0 1808		RA	8	JRIV II OVVER GAGE	30406620
07D5 0 1008		LÃ	å		30406630
07D6 0 D3O3			OUT	SAVE OUTPUT CHAR	30406640
					30406650
07D7 0 6100	LI	DX 1	0	RESET LOWER CASE SW	30406660
07D8 0 69EE			LOWER		30406670
			- - -	•	30406680
07D9 01 740007CA	M	DX L	SLTHD.0	BR IF CHAR IS FIRST	30406690
07DB 0 7004	M	DX	SFT	* TO BE PLACED IN WD	30406700
					30406710
07DC 0 6121	LI	DX 1	/21		30406720
07DD 0 7201	M	DX 2	1	SKIP IF TABLE COMPLT	30406730
07DE 0 7006		DX	TBLIS		30406740
07DF 0 7009	M	DX	EXIT		30406750
			_	• ,	30406760
07E0 0 6100		DX 1	_		30406770
07E1 0 1808	•	RA	8		30406780
07E2 0 7000	2*	DX	TBLIZ	•	30406790
					30406800
07E3 01 EE000874	TBLIZ O		ANY+27	PLACE CHAR IN DUTPUT	30406810
07E5 01 D6000874	TBLIS S	IO FS	ANT+27	* TABLE	30406820

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1BM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PART NO. 2191240 PAGE 6A

1131 KEYBOARD-PRINTER TEST

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				•					30407510	
	0831	01	4C800812		BSC	1	ENDM	RETURN TO USER	30407520	
				*****	***	***	******	***********	30407530	
				* .					30407540	
				*			PRIN	T ERROR ROUTINE	30407550	
				*					30407560	
	0833	0	0000	PRDSW	DC		/0000		30407570	
	0834	0	D815		STD		EMESG+5	SAVE DATA MESSAGE	30407580	
				*					30407590	
	0835	0	690F		STX	1	EMESG	SAVE MESSAGE ID NO	30407600	
				*			*		30407610	
	10.2			*****	***	****	******	*******************	30407620	
٠.			44800162		BSI	I	ERROR		30407630	
	0838	-	0845		DC		EMESG	MESSAGE ADDR *	30407640	
	0839	0	0000		DC			LOOP ON ERR - NONE *	30407650	
		_	4202				*******	RESET MODIFIER WORD	30407660	
	083A		6303		LDX	-	3	KEZEL MODILIEK MOKO		
	083B		6B0B		STX		EMESG+2	DESTONE VD3	30407680 30407690	
			67000A26		LDX		PTRO	RESTORE XR3		
	083E	01	4C800833	_	BSC	I	PRDSW	RETURN TO USER	30407700 30407710	
				a 🚉 🔻					30407720	
	0010	^1	40000555	DDCT			MI SCE		30407730	•
			6D0005E5	PDSWX	-		MLSCF	•	30407740	
4	U842	UU	44800161		BSI	1	START		30407750 °	
	0044		0000	•	B C C	e			30407760	
	0844		0000	¥ E 0.00	BSS	E	/5000	EDDOD ID	30407770	
	0844		E000	KE000 EMESG			/E000 /0000	ERROR ID MESSAGE ID NO	30407780	
	0845		0000	EME26		÷		HEX OUTPUT	30407790	
	0846		0000		DC	- 1.	/0000	DATA ID WORD	30407800	
	0847		0003		DC DC		/0003	ALPHA ADDR	30407810	
	0848		0000		DC		/0000 /0000	ALPHA ADDR	30407820	
	0849		0000		DC		/0000	DSWAS	30407830	
	084A 084B		0000	Maria de la companya	DC		/0000	DSW S/B	30407840	
	0040	U	0000	•	UC		70000	D3# 3/6	30407850	
				- T					30407860	
	084C	0	0000	TIMEX	חר		/0000	DELAY TIME STORAGE	30407870	
	084D		000B	ELVEN			11	DECAT TITLE STORAGE	30407880	
	0040	•	UUUD	****	***	***		*******	30407890	
				*					30407900	
	* /						PRI	ITER TEST SEQUENCE	30407910	
								CONTROL TABLE	30407920	
									30407930	
	084E	3	0859	FUNR	DC		ANY	KEYBOARD OPTION	30407940	
	084F		08FA		DC		TACAR	TAB + CARRIER RETURN		
	0850		090B		DC		UCASE	UPPER CASE CHARS	30407960	
	0851		0927		DC		LCASE	LOWER CASE CHARS	30407970	•
	0852		0943		DC		COLOR	COLOR SHIFT ROUTINE	30407980	
	0853		0959		DC		SPNDX	BACKSPACE AND INDEX	30407990	
	0854		0974		DC		AUCAR	AUTO CARRIER RETURN	30408000	
	0855		098F		DC		ROCK	TEST TILT	30408010	
	0856		09C1		DC		ROLL	TEST ROTATE	30408020	
	0857		09F3		DC		TWIST	TEST TILT AND ROTATE		
	0858		FFFF	FUND	DC.		/FFFF	*		
		-		*****	***	****	•	*******	30408050	
				•					30408060	
	**						KEYE	OARD OPTION TABLE	30408070	
				•					30408080	
٠	0859	0	0001	ANY	DC		1	ITCNT	30408090	
	085A		05FF		DC	1.7	/05FF	BLACK	30408100	
	085B		FFFF		DC		/FFFF	ITCNT	30408110	
	085C	0	0000		DC		70000	Property of the second	30408120	
	085D		0000		DC		/0000		30408130	
	085E	0	0000		DC		/0000		30408140	
	085F		0000		DC		/0000		30408150	
	0860		0000		DC		/0000		30408160	
	0861		0000		DC		/0000		30408170	* '
	0862	0	0000		DC		/0000		30408180	
							4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
	DATE		02JAN66				UN67		PROG ID	0304-2
	EC NO	•	415490	419643	•	420	31 (PAGE	6A

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• •		يرب يتسافها فافت								·					•	
IBM MA	INTENANCE DIA	AGMOSTIC PRO	GRAM FOR THE	1130 SYSTEM	PART NO. PAGE	2191240			IBM MAI	INTENANCE DI	AGNOSTIC PE	ROGRAM FOR THE	1130 SYSTEM		PART NO. PAGE	2195340 TA
		•					-, [1	1121 65	. VANAAN	TED TEST					
1131 K	EYBOARD-PRINT	TER TEST					<i>'</i>	•	1131 K	YBOARD-PRIN	11EK 1621					
	•												•			
			•				, ,	1	0000 0				_		20/00220	
0863 0		DC	/0000		30408190		1		089D 0	8800 8400	DC	/8800	•		30408870 30408880	
0864 0 0865 0		DC DC	/0000 /0000		30408200 30408210				089F 0	8200	DC DC	/8400 /8200	Ď		30408890	
0866 0	0000	DC	/0000	•	30408220				0 0A80	8100	DC	/8100	E		30408900	
0867 0		DC	/0000		30408230		1		08A1 0	8080	Dr	/8080	F		30408910	
0868 0		DC	/0000	•	30408240				08A2 0 08A3 0	8040 8020	DC	/8040	6		30408920 30408930	
0869 0 086 a 0	0000	DC DC	/0000 /0000		30408250 30408260		l		08A4 0	8010	DC DC	/802 0 /8010	ï		30408940	
086B 0	0000	DC	/0000		30408270				08A5 0	5000	DC	/5000	j		30408950	•
086C 0		DC	/0000		30408280		1		0846 0	4800	l/C	/4800	K		30408960	
086D 0		DC	/0000		30408290		1		08A7 0	4400	DC	/4400	L		30408970	
086E 0		DC DC	/0000 /0000		30408300 30408310	•			08A8 0 08A9 0	4200 4100	DC DC	/4200 /41 00	₹		304089 80 3040 8990	
086F 0		DC	/0000		30408320		1		O AABO		DC	/4080	Ö		30409000	
0871 0		DC	/0000		30408330				OBAB O	4040	DC	/4040	P	• •	30409010	
0872 0		DC	/0000		30408340				. OBAC O	4020	DC	/4020	` Q		30409020	
0873 0		DC	/0000		30408350				0 0 0 0		DC	/4010	R .		30409030	
0874 0	0000 FFFF	DC DC	/0000 /FFFF		30408360 30408370				08AE 0 08AF 0	2800 2400	DC DC	/2800 /2400			30409 040 30409050	
0012 0	FFFF			*******	30408380		•		08B0 0		DC	/2200	Ü		30409060	
		•		•	30408390	•	') :		0881 0	2100	DC	/2100	V		30409070	
		•			30408400	į.			08B2 0	2080	DC	/2080	W .		30409080	
			END	PROGRAM ROUTINE	30408410		i		08B3 0 08B4 0		DC	/2040	X		30409 090	
		******	****	******	30408420 30408430				08B5 0		DC DC	/202 0 /2010	7		304091 00 30409110	
0876	0 44800164	TYEND BSI			30408440				0886 0		DC	/0000	SPACE		30409120	
				******	30408450				08B7 0		DC	/2820	0 - 8 - 2		30409130	
					30408460				0888 0	0008	DC	/0008	EOF		30409140	
		•	W FW9	CARD CODE TABLE	30408470			1					MTER CODE TABLE		30409150	
		•	KEYD	OARD CODE TABLE	30408480 30408490						. *	PKJ	NTER CODE TABLE		30409160 30409170	•
0878 0	4220	KECOD DC	/4220	•	30408500				0889 0	D6D6	TYCOD DC	/D6D6			30409180	
0879 0		DC	/3000	,	30408510				08BA 0		DC	/BCBC			30409190	<i>c</i> .
087A 0		DC	/2000	• 0	30408520				08BB 0		DC	/C4C4	.0		30409200	
0878 0		DC	/1000	1	30408530 30408540				08BC 0 08BD 0		DC DC	/FCF C /D8D8	1		30409210	
087C 0		DC DC	/0800 /040 0	3	30408550				08BE 0		DC	/DCDC	· 3		30409220 30409230	
087E 0		DC	/0200	4	30408560				08BF 0	FOFO	DC	/FOFO	4		30409240	•
087F 0		DC	/010 0	5	30408570			•	0800	F4F4	DC	/F4F4	5		30409250	
0880		DC	/0080	6	30408580				08C1 0	DODO	DC	/D0 D0	6		30409260	
0881 0 0882 0	` -	DC DC	/004 0 /002 0	, and the second second	30408590 30408600	•	1		08C2 0 08C3 0	D4D4 E4E4	DC DC	/D4D4 /E4E4	,		30409270	
0883 0		DC	/0010	9	30408610				08C4 0		DC	/E0E0	9		304092 80 30409290	
0884 0	4420	DC	/4420	\$	30408620	w.*	•		08C5 0		DC	/4040	\$ 25,		30409300	
0885 0		DC	/8420	•	30408630		;		0 6080		DC	/0000	•		30409310	
0886 G		DC DC	/2420 /00 A0	<u> </u>	30408640 30408650				08C7 0 08C8 0		DC DC	/8080 /C2C2	. •		30409320	
0888 0		DC	/0120	e 🖟	30408660		•		0869 0		DC	/E6E6	·		30409330 30409340	
0889		DC	/8120	(· · ·	30408670				OBCA O	FEFE	DC	/FEFE	•		30409350	
088A 0		DC DC	/4120	1	30408680				08CB 0		DC	/F6F6)		30409360	
0888 0		DC	/89A0 /4000	<u> </u>	304086 9 0 30408700				08CC 0	DADA 8484	DC DC	/DADA /8484	. •		30409370	
088C 0		DC DC	/8820	CENT SIGN	30408710				OBCE O		DC	/0202	CENTS SIGN		30409380	• •
088E 0		DC	/8220	LESS THAN	30408720			$\mathcal{F}_{i}(\mathbf{x}_{i}^{(i)}) = \mathcal{F}_{i}(\mathbf{x}_{i}^{(i)})$	08CF 0	DEDE	DC	/DEDE	LESS THAN		30409390 30409400	
088F 0	8060	DC	/8060	LOGICAL DR	30408730				0 8D0 0		DC	/C6C6	LOGICAL OR		30409410	
0890 0		DC	/8000	AND	30408740				08D1 0	4444	DC	/4444	AND		30409420	
0891 0 0892 0		DC DC	/4820 /40A0	EXCLAIMATION SEMI COLOM	30408750 30408760			,	08D2 0 08D3 0	D2D2	DC DC	/4242	EXCLAIMATION		30409430	
0893 0		DC	/4060	LOGICAL NOT	30408770				08D4 0	F2F2	DC	/D2 D2 /F2F2	SEMI COLON LOGICAL NOT		30409440	
0894 0		DC	/2220	PER CENT	30408780			1	08D5 O	0606	DC	/0606	PERCENT SIGN		304094 5 0 304094 60	
0895 0	2120	DÇ	/2120	UNDERSCORE	30408790				08D6 0	BEBE	DC	/BEBE	UNDERSCORE		30409470	
0896 0		DC	/20A0	GREATER THAN	30408800			,	08D7 0	4646	DC	/4646	GREATER THAN		30409480	
0897 0 0898 0		DC DC	/2060 /0 820	QUESTION MARK COLON	30408810 30408820			•	08D8 0 08D9 0	8686 8282	DC DC	/8686	QUESTION MARK		30409490	
0899 0		DC	/0420	NUMBERS	30408830				0 AG80	COCO	DC	/8282 /COCO	COLON NUMBERS		30409500	
089A 0		DC	/0220	AT	30408840)	08DB 0	0404	DC	/0404	AT		30409510 3040952 0	
0898 0	9060	DC	/0060	QUOTE	30408850				08DC 0	EZEZ	DC	/E2E2	QUOTE		30409530	
0890 0	9000	DC	/9000	A *	30408860			.3	08DD 0	3C3E	DC	/3C3E	A		30409540	
								•					•			
DATE	02JAN66	15NOV66	15JUN67	•	PROG ID	0304-2			DATE	02JAN66	15N0V66	15JUN67			PROG 10	6304-5
EC NO.			420317		PAGE	7	1)	EC NO.	415490	419643	420317			PAGE	7A
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1131 KEYBOARD-PRINTER TEST

1131 KEYBOARD-PRI	MTER	TEST
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DATE C NO.	02JAN 41549			15JUN67 420317	ring dipole e	. 176	PROG ID PAGE	0304-2
0916 0	- 5666 San Gerbard (1841)	are garage	DC	/5666	•	9	30410220	
0915 0	7652		DC	/7652		0	30410210	
0914 0	5E72		DC	/5E7:		M	30410200	
0912 0	. 2622 7E5A		DC DC	/2622 /7E5/		I K	30410180 30410190	
0911 0	1216		DC	/1216	F	6	30410170	
0910 0	3236	1 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 +	DC	/3230	. 0	E	30410160	
090E 0	813E 1A1E		DC DC	/8130 /1A10		A C	30410140 30410150	
90D 0	0002		DC	2	ITO	CNT	30410130	
90C 0	85FF	OCAS	DC	/85FI		ACK	30410120	
908 0	0001	HCAS	E DC	191. 9 9 2 9 1	17	INT	30410100 30410110	
		•		P (1)		\$	30410090	
		•			UPPER CAS	SE	30410080	
		• .		•	CHARACTE	R COMPLIMENT	30410060 30410070	
	•	•		, *			30410050	
90A 0	FFFF	•	DC	/FFF1	•		30410030 30410040	
909 0	09FF	REDI		/09F		D	30410020	
908 0	9034		DC	/903	-	Ê	30410010	
906 0	1880 5C3C		DC	/188(/5C3(U A	30409990 30410000	
905 0	9E3C	-5	DC	/9E30	T	A	30409980	
904 0	7441		DC DC	/8060 /7441	_	TAB	30409970	
902 0	349C 8060		DC	/3490		- Tv	30409950 30409960	
901 0	2160		DC	/2160		<u>k</u>	30409940	
8FF 0	6020 346 0		DC	/6026 /3466		I LR Same	30409920 30409930	
BFE O	3C60		DC	/306) A	Ř	30409910	
BFD 0	811E		DC	/811		C	30409900	
BFB 0 BFC 0	85FF 0002		DC DC	- /85FI 2		ACK CNT	30409880 30409890	
BFA O	0001	TACA		1		CNT	30409870	
		•		1		PROPER REIUR	30409860	
		•			TAR AND	CARRIER RETUR	30409840 30409850	
		*					30409830	
8F9 0	8181		DC	/818		NE FEED	30409820	
8F7 0 8F8 0	2121 0303		DC DC	/212 /030		ACE Ne feed	30409800 30409810	
8F6 0	ADAZ		DC	/40A	Z		30409790	
8F5 0	9496 A4A6		DC	/9490 /A4A0			30409780	
8F3 0 8F4 0	9092 9496		DC DC	/909			30409760 30409770	
8F2 0	B4B6		DC	/B4B	V		30409750	
8F0 0	9C9E B0B2	*	DC DC	/9C96			30409730 30409740	
BEF 0	989A		DC	/989/			30409720	
SEE O	6062		DC	/606	2 · R		30409710	
BEC 0	5456 6466		DC DC	/5450 /6460			30409690 30409700	
8EB. 0.	5052	+ 1	DC	/505	2 0		30409680	
8E9 0 8EA 0	7072 7476		DC DC	/7072 /7470			30409660 30409670	
8E8 0	5C5E		DC	/505			30409650 30409660	
8E7 0	585A		DC	1585			30409640	
8E5 0 8E6 0	2022 7C?E		DC DC	/2022 /7C7			30409620 30409630	
8E4 0	2426		DC	/2420			30409610	
8E3 0	1416		DC	/1410	6		30409600	
8E2 0	3436 1012		DC DC	/3436			304095 90	
QET: A								
8E0 0 8E1 0	3032		DC	/303			30409570 30409580	

0917 0	629A	DC	/629A	R S	30410230
0918 0	9EB2	DC -	/9EB2	T	30410240
0919 0	B692	DC	/B692	* * 2 V * * W * * *	30410250
091A 0	96A6	DC	/96A6	X	30410260
0918 0	A221	DC	/A221	Z SP	30410270
091C 0	FEDA	DC	/FEDA	1 +	30410280
091D 0	DEF2	DC -	/DEF2	LES INT	30410290
091E 0	F6D2	DC	/F6D2) SMI	30410300
091F 0	D6E6	DC	/D6E6	: * '	30410310
0920 0	E2C6	DC	/E2C6	QTE LOR	30410320
0921 0	C2BE	DC	/C2BE	UDR	30410330
		DC	/8682	OSN CLN	30410340
0922 0	8682				
0923 0	4642	DC	/4642	GTR EXC	30410350
0924 0	0602	DC	/0602	PCT CNT	30410360
0925 0	09FF	DC	/09FF	RED	30410370
0926 0	FFFF	DC	/FFFF		30410380
				•	30410390
					30410400
		- T	LOWI	ER CASE	
		•			30410410
0927 0	0001	LCASE DC	1	ITCNT	30410420
0928 0	85FF	DC	/85FF	BLACK	30410430
0929 0	0002	DC	2	ITCHT	30410440
092A 0	813C	DC	/813C	CR A	30410450
092B 0	181C	s, DC	/181C	B C	30410460
0920 0	3034	DC	/3034	D E	30410470
092D 0	1014	DC	/1014	FG	30410480
092E 0	2420	υc	/2420	H I	30410490
		DC			30410500
092F 0	7C58		/7058		
0930 0	5C70	DC	/5C70	L M	30410510
0931 0	7450	DC	/7450	N O	30410520
0932:0	5464	DC	/5464	PQ	30410530
0933 0	6098	DC	/6098	R S	30410540
0934 0	9CB0	DC	/9CB0	ŤŰ	30410550
0935 0	8490	DC	/B490	V W	30410560
0936 0	9444	DC	/9444	X Y Z SP	30410570
0937 0	A021	DC	/A021	Z SP	30410580
0938 0	FCD8	DC	/FCD8	1 2	30410590
0939 0	DCFO	DC	/DCF0	3 4	30410600
	F4D0	DC		5 6	
			/F4D0		30410610
093B 0	D4E4	DC	/D4E4	7 8	30410620
093C 0	EOC4	DC	/E0C4	9 0	30410630
093D 0	COBC	DC	/COBC	NOS /	30410640
093E 0	8480	DC	/8480		30410650
093F 0	4440	DC	/4440	AND S	30410660
		_			
0940 0	0400	DC	/0400	AT .	30410670
0941 0	09FF	DC	/09FF	RED	30410680
0942 0	FFFF	DC	/FFFF		30410690
		*			30410700
er a ti	1.1	•	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		30410710
			רחי י	OR SHIFT	•
			COLI	nu sure!	30410720
		4			30410730
0943 0	0002	COLOR DC	2	ITCHT	30410740
0944 0	81FF	DC	/81FF	CR	30410750
0945 0	0014	DC	20	IYCHT	30410760
0946 0	0952	DC	/0952	RED O	30410770
0947 0	1105	DC	/1105	BSP BLK	
					30410780
0948 0	DAZI	DC	/DA21	+ SP	30410790
0949 0	21FF	, DC	/21FF	SP	30410800
094A 0	003B	DC	59	ITCNT	30410810
094B 0	11FF	DC	/11FF	BSP	30410820
0940 0	0014	DC	20	ITCNT	30410830
	0952	DC	/0952	RED O	30410840
094E 0					
		DC	/1105	BSP BLK	30410850
094F 0	DA21	DC	/DA21	+ SP	30410860
0950 0	21FF	DC	/21FF	SP	30410870
0951 0	003B	DC	59	ITCNT	30410880
0952 0	11FF	DC	/11FF	BSP	30410890
0953 0	0014	DC	20	ITCNT	
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0954 0 0952	DC	/0952	RED D		30410910				098F 0	0001	ROCK DC	. 1	ITCHT		30411600	
0955 0 1105 0956 0 DA21	DC DC	/1105 /DA21	BSP BLK + SP		30410920 30410930		_)		0990 0		DC	/85FF	BLACK		30411610	
. 0957 0 21FF	DC	/21FF	SP		30410940				0991 0 0992 0		DC DC	2 /81CO	ITCNT CR NOS		3041162 0 30411630	
0958 0 FFFF	DC	/FFFF			30410950				0993 0		DC	/8040	, \$		30411640	
	•		*	•	30410960 30410970				0994 0	0020	DC	/0020	. I		30411650	
	•	BA	CK SPACE AND I	NDEX	30410980				0995 0 0996 0		DC DC	/60A0 /E0D0	8 Z		30411660 30411670	
	*	•	ITCNT		30410990 30411000				0997 0		DC	/9050	w ŏ		30411680	
0959 0 0001 0954 0 8181	SPNDX DC DC	/8181	CR CR		30411010				0998 0		DC	/1030	F D		30411690	
0958 0 45FF	DC	/45FF	BLACK		30411020		,		0999 0 099A 0		DC DC	/70B0 /F0D 8	M U		30411700 30411710	
095C 0 0002	DC DC	2 /3611	ITCNT E *		30411030 30411040				0998 0		DC	/9858	S K		30411720	•
095D 0 3611 095E 0 111E	DC	/111E	* C		30411050		- 1 · 1		0990 0		DC	/1804	B AT		30411730 30411740	
095F 0 1111	DC	/1111	* *		30411060			_	099D 0 099E 0		DC DC	/4484 /C4E4	AND - O 8		30411750	•
0960 0 3E11 0961 0 1156	DC DC	/3Ell /1156	A +		30411070 30411080		7		099F 0		DC	/4464	Y Q		30411760	
0962 0 1111	, DC	/1111			30411090				0940 0		DC DC	/2414 /5494	H , G		30411770 30411780	
0963 0 9A11	DC	/9A11	\$ *		30411100	• 1			09A1 0 09A2 0		DC	/D4F4	7 5		30411790	
0964 0 1111 0965 0 5A11	DC DC	/1111 /5A11	* *		30411110 30411120				09A3 0	B474	DC	/8474	Y N		30411800	
0966 0 111E	DC	/111E	* C		30411130		,		09A4 0 09A5 0		DC DC	/341C /5C9C	E C °		30411810 30411820	
0967 0 1111	DC DC	/1111	* *		30411140 30411150				09A6 0		DC	/DCFC	3 i		30411830	
0968 0 3E11 0969 0 111A	DC DC	/3E11 /111A	* 8		30411150				09A7 0		DC	/BC7C	/ J		30411840	•
096A 0 8141	DC	/8141	CR TAB		30411170				09A8 0		DC DC	/3C21 /02 42	CNT ECX		30411850 30411860	
096B 0 2213	DC	/2213	I DX		30411180 30411190				OPAA O		DC	/82C2	CLN =		30411870	
096C 0 7613 096D 0 3 213	DC DC	/7613 /3213	N DX D DX		30411200				09AB 0	E2A2	DC	/E2A2	QTE Z		30411880 30411890	
096E 0 3613	DC	/3613	E DX		30411210				D9AC O		DC DC	/622 2 /1252	R LOR F O		30411900	
096F 0 9613 0970 0 09FF	DC DC	/9613 /09FF	X DX Red		30411220 30411230				O9AE O	92D2	DC	/92D2	W SMI		30411910	
0971 0 0002	66	2	ITCHT		30411240	$\mathcal{F}_{\mathcal{F}_{\mathcal{F}_{\mathcal{F}_{\mathcal{F}_{\mathcal{F}}}}}}$			09AF 0 09B0 0		DC DC	/F2B2 /72 3 2	1 0		30411920 30411930	
0972 0 85FF	DC	/85FF	CR		30411250				09B1 0		DC	/1A5A	B K		30411940	
0973 0 FFFF	₽	/FFFF			30411260 30411270				09B2 0		DĊ	/9ADA	S T		30411950	
	•				30411280				09B3 0 09B4 0	: -	DC DC	/C686 /4606	LNT QSN GTR PCT	the state of the s	30411960 30411970	
•	* AUTOMATI	C CARRIER 6	RETURN +		30411290 30411300				09B5 0		DC	/2666	H Q		30411980	
0974 0 0001	AUCAR DC	/0001	ITCNT		30411310				0986 0		DC	/A6E6	Y '		30411990 30412000	
0975 0 85FF	DC	/85FF	BLACK		30411320		•		0987 0 0988 0		DC DC	/D696 /5616	PĜ		30412010	
0976 0 0001 0977 0 1E3C	DC DC	1 /1E3C	ITCHT		30411330 30411340				09B9 J	3676	DC	/3676	E N		30412020	
0978 0 6060	DC	/6060	ŘŘ		30411350	- 1 L			09BA 0		DC DC	/86F 6 /DE9E	V) Les t		30412030 30412040	•
0979 0 2034	DC	/2034	1 E		30411360 30411370				09BC 0		DC	/5E1E *	Ľ Ċ		30412050	
097A 0 6021 097B 0 6034	DC DC	/6021 /6034	R E		30411380				09BD 0		DC	/3E7E	A J		30412060 30412070	
097C 0 9CB0	DC	/9CB0	ŤÜ		30411390				09BE 0 09BF 0		DC DC	/BEFE /09FF	UDR (RED		30412080	
097D 0 6074	DC	/6074 /21FF	RN		30411400 30411410				0900 0		DC	/FFFF			30412090	
097E 0 21FF 097F 0 0078	DC DC	120	ITCHT		30411420	,					•				30412100 30412110	
0980 0 21FF	DC	/21FF	SPACE		30411430				09C1 0	0001	ROLL DC	1	ITCHT		30412120	
0981 0 0001 0982 0 09FF	DC DC	1 /09FF	ITCNT RED		30411440 30411450		•		0902 0	85FF	DC	/85FF	BLACK		30412130	
0983 0 0001	DC	1	ITCHT		30411460				09C3 0		DC DC	2 /81C 0	ITCNT CR NOS		30412140 30412150	
0984 0 1E3C	DC	/1E3C	C A		30411470 30411480				0905 0		DC	/E0D 9	9 6		30412160	
0985 0 6060 0986 0 20 34	DC DC	/6060 /2034	R R I E		30411490				0906 0		DC	/FOD8	4 2		30412170	
0987 0 6021	DC	/6021	R .		30411500			. •	09C7 0		DC DC	/C4E4 /D4F4	0 8 7 5		30412180 30412190	
0988 0 6034	DC DC	/6034 /9080	R E T U		30411510 30411520				0969 8		DC	/DCFC	3 1		30412200	•
0989 0 9 0 80 098 a 0 6074	DC	/6074	Ř N	•	30411530			1	09CA 0		DC	/BC9C	<u> </u>		30412210	
0988 0 21FF	DC	/21FF			30411540				09CB 0		DC DC	/8494 /A484	V X		30412220 30412230	
098C 0 0078 098D 0 21FF	DC DC	120 /21FF	ITCNT SPACE		30411550 . 30411560			3	09CD 0	9880	DC	/9880	ŠU		30412240	
098E 0 FFFF	DC	/FFFF	31 24		30411570				09CE 0		DC DC	/90A0 /804 0	W Z		30412250 30412260	
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09D4 0 SC7C DC	30412310 30412320 30412330 30412350 30412350 30412360 30412380 30412380 30412390 30412400 30412410 30412420 30412450 30412450 30412450 30412480 30412480 30412500 30412510 30412520 30412530 30412530 30412530
09D5 0 3414 DC	30412320 30412340 30412350 30412360 30412370 30412380 30412390 30412400 30412400 30412400 30412420 30412420 30412420 30412430 30412450 30412450 30412500 30412500 30412510 30412520 30412530 30412530 30412550
09D6 0 3414 09D7 0 2404 09D7 0 2404 09D8 0 1830 09D9 0 1020 00C /1020 0F 1 09D8 0 8021 0PD8 0 8021 0PD8 0 361E 0PC /3616 0PC /3616 0PC /3606 0PC /3600 0PC /	30412340 30412350 30412360 30412370 30412380 30412400 30412400 30412410 30412420 30412430 30412450 30412450 30412450 30412500 30412500 30412500 30412500 30412520 30412530 30412530 30412530
09D8 0 1830	30412350 30412360 30412370 30412380 30412490 30412410 30412420 30412430 30412430 30412450 30412450 30412450 30412470 30412480 30412500 30412510 30412520 30412530 30412530 30412530
09D9 0 1020 DC	30412360 30412370 30412380 30412390 30412400 30412410 30412420 30412430 30412440 30412450 30412460 30412470 30412480 30412480 30412500 30412500 30412510 30412530 30412530 30412530
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09DC 0 3616	30412400 30412410 30412420 30412430 30412450 30412450 30412450 30412470 30412480 30412480 30412500 30412510 30412520 30412530 30412530
09DE 0 1432 DC /1432 B D 09DF 0 1222 DC /1222 F I 09E0 0 0242 DC /0242 CNT EXC 09E1 0 6252 DC /0242 CNT EXC 09E1 0 6252 DC /0242 R D C /02	30412410 30412420 30412430 30412440 30412450 30412460 30412470 30412480 30412480 30412500 30412510 30412520 30412530 30412530 30412530
09DF 0 1222 DC	30412420 30412430 30412440 30412450 30412460 30412470 30412480 30412490 30412500 30412510 30412520 30412520 30412530 30412530
09E0 0 0242 DC	30412430 30412440 30412450 30412460 30412470 30412480 30412490 30412500 30412510 30412520 30412520 30412530 30412540
09E1 0 6252	30412440 30412450 30412460 30412470 30412480 30412490 30412500 30412510 30412520 30412520 30412530 30412540
09E3 0 4666 DC	30412460 30412470 30412480 30412500 30412510 30412510 30412520 30412530 30412540
09E4 0 5676 DC	30412470 30412480 30412490 30412500 30412510 30412520 30412530 30412540 30412550
09E5 0 SETE	30412480 30412490 30412500 30412510 30412520 30412530 30412540 30412540
09E6 0 BE9E	30412490 30412500 30412510 30412520 30412530 30412540 30412550
09E7 0 8696	30412520 30412530 30412540 30412550
09E9 0 9AB2 DC /9AB2 S U 09EA 0 92A2 DC /92A2 M Z 09EB 0 82C2 DC /82C2 CLN = 09EC 0 E2D2 DC /E2D2 QTE SM1 09ED 0 F2DA DC /F2DA LNT + 09EE 0 C6E6 DC /C6E6 LDR • 09FF 0 D6F6 DC /D6F6 DC	30412520 30412530 30412540 30412550
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09EB 0 82C2	30412540 30412550
09EC 0 E2D2	30412550
09ED 0 F2DA	20412540.
09EF 0 D6F6 09F0 0 DEFE 09F1 0 29FF 09F2 0 FFFF 09F3 0 0001 09F4 0 85FF 0C /85FF 0C /85FF 0FF 0FF 0C /85FF 0FF 0FF 0FF 0C /85FF 0FF 0FF 0FF 0FF 0FF 0FF 0FF 0FF 0FF 0	30412360
09F0 0 DEFE DC /DEFE LES (09F1 0 29FF DC /29FF RED 09F2 0 FFFF DC /29FF RED 09F3 0 0001 TWIST DC 1 ITCNT 09F4 0 85FF DC /85FF BLACK 09F5 0 0002 DC 2 ITCNT 09F6 0 81C0 DC /81C0 CR NDS 09F7 0 3880 DC /3E80 A + 09F8 0 7E40 DC /7E40 J \$ 09F9 0 8E00 DC /7E40 J \$ 09F9 0 8E00 DC /FE20 (1 09F8 0 FE20 DC /FE20 (1 09F8 0 DE60 DC /DE60 LES R 09FC 0 9EA0 DC /9EA0 T Z 09FD 0 5EE0 DC /5EE0 L 9 09FE 0 1ED0 DC /1ED0 C 6 09FF 0 3690 DC /3690 E W 0A00 0 7650 DC /7650 N D 0A01 0 8610 DC /8610 V F 0A02 0 F630 DC /7650 N D 0A03 0 D670 DC /8680 X U 0A05 0 56F0 DC /56F0 P 4 0A06 0 16D8 DC /56F0 P 4	30412570
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09F2 0 FFFF DC /FFFF 00F3 0 0001 TWIST DC 1 ITCNT 09F4 0 85FF DC /85FF BLACK 09F5 0 0002 DC 2 ITCNT 09F6 0 81C0 DC /81C0 CR NDS 09F8 0 7840 DC /3880 A , 09F9 0 8E00 DC /7E40 J \$ 09F9 0 BE00 DC /7E40 J \$ 09F9 0 BE00 DC /FE20 (I I 09F8 0 FE20 DC /FE20 (I I 09FB 0 DE60 DC /DE60 LES R 09FC 0 9EA0 DC /9EA0 T Z 09FD 0 5EE0 DC /5EE0 L 9 09FE 0 1ED0 DC /1ED0 C 6 09FF 0 3690 DC /3690 E M 0A00 0 7650 DC /3690 E M 0A02 0 F630 DC /8610 V F 0A02 0 F630 DC /8610 V F 0A03 0 D670 DC /9680 X U 0A05 0 56F0 DC /56F0 P 4 0A06 0 16D8 DC /16D8 G 2 0A07 0 2698 DC /16D8 G 2	30412590 30412600
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09F3 0 0001 TWIST DC 1 1TCNT 09F4 0 85FF	30412610 30412610 30412620 30412630
09F4 0 85FF	
09F5 0 0002 DC 2 ITCNT 09F6 0 81C0 DC /81C0 CR NDS 09F7 0 3E80 DC /3E80 A , 09F8 0 7E40 DC /7E40 J \$ 09F9 0 8E00 DC /8E00 UDR . 09F9 0 8E00 DC /FE20 (I I 09F8 0 DE60 DC /DE60 LES R 09FC 0 9EA0 DC /9EA0 T Z 09FD 0 5EE0 DC /5EE0 L 9 09FE 0 1ED0 DC /1ED0 C 6 09FF 0 3690 DC /3690 E M 0A00 0 7650 DC /3690 E M 0A02 0 F630 DC /8610 V F 0A02 0 F630 DC /6630 D DC /6630 D D 0A03 0 D670 DC /6670 M D 0A04 0 9680 DC /9680 X U 0A05 0 56F0 DC /56F0 P 4 0A06 0 16D8 DC /16D8 G 2 0A07 0 2698 DC /2698 M S	30412640 30412650
09F6 0 81C0 DC /81C0 CR NDS 09F7 0 3E80 DC /3E80 A , 09F8 0 7E40 DC /7E40 J \$ 09F9 0 8E00 DC /8E00 UDR . 09FA 0 FE20 DC /FE20 (I I 09FB 0 DE60 DC /DE60 LES R 09FC 0 9EA0 DC /9EA0 T Z 09FD 0 5EE0 DC /5EE0 L 9 09FF 0 1ED0 DC /1ED0 C 6 09FF 0 3690 DC /3690 E M 0A00 0 7650 DC /7650 N O 0A01 0 8610 DC /8610 V F 0A02 0 F630 DC /7630) D 0A03 0 D670 DC /8630) D 0A04 0 9680 DC /9680 X U 0A05 0 56F0 DC /56F0 P 4 0A06 0 16D8 DC /16D8 G 2 0A07 0 2698 DC /16D8 G 2	30412660
09F8 0 7E40 DC /7E40 J \$ 09F9 0 BE00 DC /BE00 UDR • 09F8 0 FE20 DC /FE20 (1 09FB 0 DE60 DC /DE60 LES R 09FC 0 9EA0 DC /9EA0 T Z 09FD 0 SEE0 DC /5EE0 L 9 09FE 0 1ED0 DC /1ED0 C 6 09FF 0 3690 DC /3690 E W 0A00 0 7650 DC /7650 N D 0A01 0 8610 DC /8610 V F 0A02 0 F630 DC /F630) D 0A03 0 D670 DC /F630) D 0A04 0 9680 DC /9680 X U 0A05 0 56F0 DC /56F0 P 4 0A06 0 16D8 DC /16D8 G 2 0A07 0 2698 DC /2698 H S	30412670
09F9 0 BE00 DC /BE00 UDR . 09FA 0 FE20 DC /FE20 (I 09FB 0 DE60 DC /DE60 LES R 09FC 0 9EA0 DC /9EA0 T Z 09FD 0 SEE0 DC /5EE0 L 9 09FE 0 1ED0 DC /1ED0 C 6 09FF 0 3690 DC /3690 E M 0A00 0 7650 DC /7650 N D 0A01 0 B610 DC /8610 V F 0A02 0 F630 DC /F630) D 0A03 0 D670 DC /B610 V F 0A04 0 96B0 DC /96B0 X U 0A05 0 56F0 DC /56F0 P 4 0A06 0 16D8 DC /16D8 G 2 0A07 0 2698 DC /2698 H S	30412680
09FA 0 FE20 DC /FE20 (I O9FB 0 DE60 DC /DE60 LES R O9FC 0 9EA0 DC /DE60 LES R O9FC 0 9EA0 DC /SEE0 L 9 O9FD 0 SEE0 DC /SEE0 L 9 O9FF 0 1ED0 DC /1ED0 C 6 O9FF 0 3690 DC /3690 E M OA00 0 7650 DC /7650 M OA01 0 8610 DC /8610 V F OA02 0 F630 DC /F630) D OA03 0 D670 DC /F630) D OA03 0 D670 DC /F630 X U OA04 0 9680 DC /9680 X U OA05 0 56F0 DC /56F0 P 4 OA06 0 16D8 DC /16D8 G 2 OA07 0 2698 DC /2698 M S	30412690 30412700
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O9FE 0 1EDO C /1EDO C 6 09FF 0 3690 DC /3690 E M 0A00 0 7650 DC /7650 N D 0A01 0 8610 DC /8610 V F 0A02 0 7630 DC /7630 D D DC	30412730
09FF 0 3690 DC /3690 E W 0A00 0 7650 DC /7650 N O 0A01 0 8610 DC /8610 V F 0A02 0 F630 DC /F630) D 0A03 0 D670 DC /D670 M 0A04 0 9680 DC /9680 X U 0A05 0 56F0 DC /56F0 P 4 0A06 0 16D8 DC /16D8 G 2 0A07 0 2698 DC /2698 H S	30412740 30412750
0A00 0 7650 DC /7650 N D 0A01 0 8610 DC /8610 V F 0A02 0 F630 DC /F630) D 0A03 0 D670 DC /D670 + M 0A04 0 9680 DC /9680 X U 0A05 0 56F0 DC /56F0 P 4 0A06 0 16D8 DC /16D8 G 2 0A07 0 2698 DC /2698 H S	30412760
0A01 0 8610 DC /8610 V F 0A02 0 F630 DC /F630) D 0A03 0 D670 DC /D670 M 0A04 0 9680 DC /9680 X U 0A05 0 56F0 DC /56F0 P 4 0A06 0 16D8 DC /16D8 G 2 0A07 0 2698 DC /2698 H S	30412770
OAO3 O D670 DC /D670	30412780
0A04 0 9680 DC /9680 X U 0A05 0 56F0 DC /56F0 P 4 0A06 0 16D8 DC /16D8 G 2 0A07 0 2698 DC /2698 H S	20412700
OAOS O S6FO DC /56FO P 4 OAO6 O 16D8 DC /16D8 G 2 OAO7 O 2698 DC /2698 H S	30412790
0A06 0 16D8 DC /16D8 G 2 0A07 0 2698 DC /2698 H S	30412800
	30412800 30412810
	30412800
	30412800 30412810 30412820 30412830 30412840
0A09 0 A618 DC /A618 Y B 0A0A 0 E604 DC /E604	30412800 30412810 30412820 30412830 30412840 30412850
OAOB O C644 DC /C644 LDR AND	30412800 30412810 30412820 30412830 30412840 30412850 30412860
OAOC 0 8684 DC /8684 QSN -	30412800 30412810 30412820 30412830 30412840 30412850
0A0D 0 46C4 DC /46C4 GTR 0	30412800 30412810 30412820 30412830 30412840 30412850 30412870 30412870 30412880 30412880
0A0E 0 06E4 DC /06E4 PCT 8	30412800 30412810 30412820 30412830 30412840 30412850 30412870 30412870 30412880 30412890
OAOF 0 1AA4 DC /1AA4 B Y OA10 0 5A64 K Q	30412800 30412810 30412820 30412830 30412840 30412850 30412860 30412870 30412880 30412890 30412990
0A11 0 9A24 DC /9A24 S H	30412800 30412810 30412820 30412830 30412840 30412850 30412860 30412860 30412880 30412900 30412910 30412910
	30412800 30412810 30412820 30412830 30412840 30412850 30412860 30412870 30412880 30412890 30412990
20 20 20 20 20 20 20 20 20 20 20 20 20 2	30412800 30412810 30412820 30412830 30412840 30412850 30412860 30412870 30412880 30412890 30412910 30412910
DATE 02JAN66 15NOV66 15JUN67 EC ND. 415490 419643 420317	30412800 30412810 30412820 30412830 30412840 30412850 30412860 30412870 30412880 30412890 30412910 30412910

0412.0	0414		DC		/DA14	* 6		30412950
0A12 0	DA14 F254		DC		/F254	LNT P		30412960
0A14 0	B294	- +	DC		/B294		1985 * 1 177	30412970
7	72D4		DC		/72D4	U X		30412980
	32F4	<i>*</i> .	DC		/32F4			30412990
0A16 0 0A17 0			DC		/12B4	D 5		30413000
	.12B4	4.	DC		/12D4 /5274	F V		30413010
0A18 0	5274	· ."				O N	100	30413020
0A19 0	9234		DC		/9234	M E		
OALA O	D21C		DC		/D21C	SMI C		30413030
OA1B O	E25C		23		/E25C	QTE L	* 25 A	30413040
OA1C O	A29C		DC		/A29C	2 T	Company of the Company	30413050
OAID O	62DC		DC		/62DC	R 3		30413060
OALE	22FC		DC		/22FC	1 1	and the second of	30413070
OA1F O	02BC		DC		/02BC	CNT /		30413080
0A20 0	427C		DC		/427C	EXC J		30413090
0A21 0	823C		DC		/823C	CLN A		30413100
0A22 G	C225	4.	DC		/C225	(BLACK		30413110
0A23 0	29FF		DC		/29FF	RED		30413120
0A24 0	FFFF		DC		/FFFF			30413130
			*****	****	*******	******	*****	30413140
			*****	****	******	*****	****	30413150
								30413160
4.			•		PRIN'	TER OUTPUT ST	TATUS	30413170
×						TABLES	•	30413180
					PRIN'	TER NO 0		30413190
0A26	0000		BS	s E	0		LAB	EL 30413200
0A26 1	OBFA		PTRO DC		TACAR	WORD POINTER	R AD	R 30413210
0A27 0	0002		DC		2	TEST POINTER	RT RT	N 30413220
0A28 0	8000		DC		/8000	PTR STATUS	ST	S 30413230
			•		/A000	SELECT KBD		30413240
			*		/C000	READ KBD NE	(T	30413250
					/FCOO-FFFE	COUNT FOR I		30413260
					/FFFF	LOST INT ER		30413270
					/E000	WAIT TYP RE		30413280
			•		/F000	WAIT KBD IN		30413290
* *			•		/8000	IGNORE		30413300
0A29 0	81FF		DC		/81FF	NEXT PTR DU	TPUT WORD OU	
OAZA O	0001		DC		i	ITERATION C		
OAZB O	0001		DC		î	SHIFT WORD	ŠL	
OAZC O	0000	100	DC		•	WORDS PRINT		
OAZD O	0000		DC			LAST ITCHT		
0A2E 1	0000 0A29		DC		PTRO+DUT	EAST TICHT	WR	
OAZE 1	0900		DC		/0900	WRITE COMMA		30413370
			DC			MATIE COMPA	PT	
0A30 0	0000				0	CENCE DEU C		
0A31 0	0F01		DC		/0F01	SENSE DSW CO		30413390
0A32 0	0000		DC		40500	SENSE - NO	RESET SN	
0A33 0	0F00		DC		/0F00			30413410
0A34 0	0000		DC		10000		.KE	
0A35 0	0000		DC		/0000	SELECT KEYBO		30413430
0A36 1	0A34		DC		PTRO+KEY	DEAD MEMORIN	SE SE	
0A37 0	0A00		DC		/0A00	READ KEYBOAL		30413450
0A38 0	0000		DC		/0000	ERROR DSW W		
0A39 0	0000		DC		/0000	DSW SHOULD I	TAVE BEEN	30413470
.0A3A 1	OA3C		RDBS DC		BITSW			30413480
OA3B O	3A00		DC		/3A00			30413490
OA3C O	0000		BITSW DC		/0000			30413500
			#					30413510
								30413520
			.			CONSOLE SWIT	TCH	30413530
			•		STATU	S ROUTINE		30413540
			•		_			30413550
						ROUTINE PRIN'		30413560
			•		_	GE IN THE STA		30413570
9		,	· j			HE CONSOLE/KI		30413580
	n i se li pril. •		•		SWIT	CH. IF NO C	IANGE	30413590
			*			ADE THEN NOT	ING IS	30413600
			•		PRIN	TED.		30413610
			•	120			a, ₹ a.	30413620
						•		
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DA3D O	0000	SWSET	DC				30413630	
DASE O	08F3		XIO		SNR+PTRO	SENSE DEVICE STATUS	30413640	
DASF O	F03E E4000A80		EOR		LAST	CHECK SWITCH SETTING	30413650 30413660	
DA42 0	E83C		OR	Ľ	K1000 FIRST		30413670	
	4C980A3D		BSC	1	SWSET++-	RETURN IF NOT CNGED	30413680	
		*					30413690	
DA45 0	08EC		XIO		SNR+PTRO	SENSE DEVICE STATUS	30413700	
DA48 0	E4000A80 D035		STO	L	K1000 Last		30413710 30413720	
	4C200A56		BSC	L	SWSC . Z	BR IF IN CONSOLE	30413730	
		*	_				30413740	•
	C4000641		LD	L	THLVE	SET ROUTINE NO.	30413750	
DA4D GI	D40005DD		STO	L	RID		30413760 30413770	
DA4F 0	1010	~	SLA		16		30413780	
	D400085C		STO	L	E+YHA		30413790	
							30413800	
	6500A000		LDX	Ll	/A000	SET TO SELECT KBD NEXT	30413810	
DA54 0 DA55 0	CO2C . 701A		MDX		KBMES SWSP	KEYBOARD MESSAGE GO PRINT THE SWS	30413820 30413830	
				•			30413840	
	44000812	SWSC	BSI	L	ENDM	TERMINATE KBD ENTRY	30413850	
0A58 0			SRA		16		30413860	
	C40005E0 18C1		LD RTE	L	SW1		30413870 30413880	
DASC O	4820		BSC		1 2	• • • • • • • • • • • • • • • • • • • •	30413890	
0A5D 0	1081		SLT		ī		30413900	
0A5E 0	D001		STO		*+1		30413910	
	65000000 C4000858		LDX		/0000 ANY+2	CHECK IE AND KON CHIDD	30413920	
0863 0	C400085B 4810		LD BSC	L	4N176	CHECK IF ANY KBD ENTRY BR IF TABLE EMPTY	30413930 30413940	
DA64 0	6101		LDX	1	1	SET TO LOOP RTN 1	30413950	
0A65 0	69C1	SWSD	STX		RTN+PTRO		30413960	
	C500084E		LD	Ll	FUNR		30413970	
0A68 0	DOBD		STO		ADR+PTRO		30413980	
DA68 0	C400085A D08D		LD STO	L	ANY+1 Dut+Ptro		30413990 30414000	
		•	٠.٠		20		30414010	
	6D0005E0	SWSE	STX	L1	SW1	SET OR CLEAR LOOP RTN	30414020	
DAGE 0	0807	_	X10		SEE+PTRO	DESELECT KEYBOARD	30414030	
DA6F O	C018	*	LD		CNMES	CONSOLE MESSAGE	30414040 30414050	
	20.0				CHHES	JUNJULL MEJJAGE	30414060	
DA70 0	DOOC	SWSP	STO		LDGM+4	SAVE MESSAGE	30414070	
DA71 0	69B6		STX	1	STS+PTRO	SET PRINTER STATUS	30414080	
	1010		SLA		16	DECET CIDET INDICATOR	30414 090	
0A73 0	DOOB	****	STO:	****	FIRST ******	RESET FIRST INDICATOR	30414100 30414110	
DA74 00	44800163		BSI	1	LOG	•	30414110	
DA76 1			DC		LOGM	ADRS OF MESS #	30414130	
	45000155	****		****	********	######################################	30414140	
UA /7 01	4C00065C		BSC	L	G03	RETURN TO MAINLINE	30414150	
DA79 0	0000	LOGM	DC		/0000	•	30414160 30414170	
DATA O	0000		DC		/0000		30414180	
DA7B O	0000		DC		/0000		30414190	
DATC B	6000		DC		/0000		30414200	
DA7D O	2000		DC		/0000		30414210	
		•					30414220 30414230	
DATE O		LAST			/0000	LAST KBD/CNSL SW SET	30414240	
DATE 1	OA7F	FIRST			FIRST	PROG RESRT INDICATOR	30414250	
0 08AC	1000	K1000	DC		/1000	CONSTANT	30414260	
DA81 1	0A82	KBMES	DC		Kametal		30414270	•
DA82 0		~04E3	DC		KBMES+1 /5A36	KEYBOARD	304142 8 0 304142 9 0	
DA83 0			DC		/A61A		30414300	
					-			
DATE	OZJANGG	1500			JN67		PROG ID	0304-2

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1131 K	EYBOA	RD-PRINTER TES	T			
0A84 0	523)E	DC	/523E		30414310
0A85 0	623	12	DC	/6232		30414320
OAB6 0			DC	/8100		30414330
0A87 9		-	DC	/FFFF	TERMINATOR .	30414340
		•		• • • • •		30414350
0ABB 1	DAE	9 CNMES	DC	CNMES+1		30414360
0A89 0	165		DC	/1E52	CONSOLE	30414370
OASA O	769	À	DC	/769A	33.13332	30414380
OA8B O	525	E	DC	/525E		30414390
0A8C 0	360	0	DC	/3600		30414400
OABD 0	FFF	F	DC	/FFFF	TERMINATOR	30414410
		****	*****	*********	*******	30414420
						30414430
OABE	064	3	END	TYCUS		30414440

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1131 KEYBOARD-PRINTER TEST

1131 KEYBOARD-PRINTER TEST

CROSS R	EFERENCE	LISTING TO LEAD TO MADE LONG TO THE LONG T
SYMBOL	VALUE	REFERENCES
ADR	0000	06DE,06E3,0A68
ALL	0734	072E
ANY	0859	0615,061B,064B,065A,065E,07E3,07E5,0802,0806,080D,
		0813,0819,081D,081F,0823,0826,082A,084E,0A50,0A61,
		0A69
AUCAR	0974	0854
BASIC	0735	072A
BEGIN	0160	0000,0643
BITSM	OA3C	06B9,0A3A
BSPSE	07CD	080F
BSYOK	0755	075E
CMPRE		07B1
CNMES	88A0	0A6F,0A88
CNVRT	07AE	0784
COLOR	0943	0852
COMIN	05E7	0639,073A,0781,07F2
COMIX	0639	0610,0623,0630
COM13	05FD	05F8
DSWAS	076F	0742,0746,0788,0788,018F
DSWBS	0771	0776,0777,0795,079A
DSMBY	076D	0752,0757
DSWIT	063D	05EA, 05FF, 0607, 061F, 0625, 062C, 0632
ELVEN	084D	06A4,06A8
EMESG	0845	07BE.0834.0835.0838.083B
END	0164	0000,0000,0000,0000,0876
ENDM	0812	0831,0A56
ENDM1	0821	0818
ENDM2	0829	0816
ENDM3	082B	0828
ERIND	0640	0618,0638,064D,066C,0760
ERLCK	0166	그 그 그 이 그 아이는 아이는 이번에 들어왔다. 그들은 그 학
ERR	0012	0637,0762,0768
ERROR	0162	0000,0836
ERSE	07F9	07BB
ERSEA	07CC	07F9,07FA
ERSE1	0809	O7FF
ERSE2	080F	0808
ERSLC	0709	0789
EXEC3	068D	0678
EXEC7	0693	07A1
EXEC9	0696	0687,068A,06CA,0714
EXIT	07E9	07DF,07EC
FIRST	OA7F	0646,0A42,0A73,0A7F
FUND	0858	0734,0825,0829
FUNR	084E	06D4,06D9,0734,0A66
F0200	0772	0796,079C
60	0646	05DE,05E3,05E4
G03	065C	0A77
I	069C 017A	06BF,06C1,06E1,0704,070B,0717,071D
ILO		0000
ILI	018A	9000
ILZ	019A	0000
IL3	01/4	0000
IL4	OLBA	0000
INERR	075F	0660
ITR	0004	0660,0606,0716,0719,0723
KAOOO	063C	05FB,05FD,060A
KBDRQ	0603	05ED
KBDSV	062A 060A	05F3 0604
KBD2 KBEOO	0642	0608
KBMES	0042 0A81	0A54,0A81
KCMSL	0774	0600.0626.0633.0747.0758.0778.0790.0798
KC090	063F	062A
KECOD	0878	07AE
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	KEFFF	0773	0620,062E,0743,0753,078C,0797
			0793,0780,0785,0784,07C1,0A36
	KEY	000E	
	KEYBD	07A3	0685
	KEYER	0636	0602,0609,0629
	KE000	0844	05F6,07E9
	KFFE7	07CB	07FB
		0770	0713
	KFF00		
	KF000	07CF	05F1,0789
	KF800	069E	068F
	KOCOO	076E	0754,0759
	K0001	069F	0681,0684
	K0008	07CE	0828
	K1000	08A0	0A40,0A46
	K4200	063B	062D,0635
	K8000	063E	0627,0628,0779
	LAST	OA7E	0A3F, 0A48
	LCASE	0927	0851
	LOG	0163	
			00CO, 0A74
	LOGBY	0167	0736,07EE
	LOGM	0A79	0A70, DA76
	LOWER	0707	C7C5.07D2.07D8
	MARK	06A0	0755
	MARKE	0731	0720
	MARKG	06E3	06A6,070E
	MARKL	06E5	06D2
	MARKN	0712	0709
	MARKP	06FD	06E7,06EE,06FC
	MARKO	06FF	06E8
	_	0701	06E9
	MARKR		
	MARKS	070A	0706
	MARKT	06B4	06AD
	MARKU	06B5	06AC,06B4
	MARKZ	06FC	06F6
	MARK1	06BB	06C4,06C9
	MARK2	06CB	06DB
		06CD	
	MARKS		072B,072F
	MARK4	06CE	0733
	MARK5	06D9	0714,0726
	MLSCF	05E5	0698,06AE,06F8,0840
	NCAP	07C8	0786
	NOCP	07C5	0787
	NOIN	0775	0688
	NOS	0006	0663,06E0,070A,070C,071C,071F
	DUT	0003	06C3,0712,07D6,0810,0A2E,QA6B
	PAD	0007	0664,06D8,06DD,0720,C721
	PDSWX	0840	074E,07F0
	PID	05DC	0645
	PRCON	066C	066B, U696, 0769, 077F, 079B, U7F7
	PRDSW	0833	074A,075C,0765,077D,079F,07A9,07C2,083E
	PTR	000A	0741,0751,0775,0787,0794,07A4
	PTRO	0A26	05E8,0648,065C,0674,0688,0694,06CE,06E3,06E5,06EA,
			06F0,073E,0762,082C,083C,0A2E,0A36,0A3E,0A45,0A65,
			0A68.0A6B.0A6E.CA71
	0.40	AENE	ondo yond by yong yong the same and yong the yong the same and yong the yon
	RAD	05DE	
	RDBS	9A3A	06B7
	RDY2	074C	0738
	READY	0736	0691,074C
•	RED1	0909	0821
	RESTO	069D	0677,0693
	RID	05DD	064F,066F,06AA,06D0,06EC,06F2,0A4D
			TOTE TOUR TURK TURE TURE TURE TURE
	RLCF	0168	
	ROCK	098F	0855
	ROLL	09C1	<b></b>
	RQKB	OIBC	0000,0783
	ROTY	018B	0000,073C,07F4
	RTN	0001	
			060E,06CE,06E5,06EA,06F0,0A65
	RTNSH	0165	0680,06F4
	SEE	0010	060C,07A3, <b>9</b> A6E

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079E
                            078D
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                             0682,07C4,07C6,07FC
            0781
            07E0
                            0661,06E2,0703,0705
0613,0669,0709,07E7,07FE,081A
0A3E,0A45
SLTWD
            O7CA
SNR
            0000
                            QA3E, QA45

QB53

QD00, Q69A, Q6B2, Q6FA, Q842

Q5FQ, Q5FS, Q5FE, Q6QB, Q61E, Q62B, Q648, Q676, Q688, Q69Q,

Q694, Q78A, Q7EB, Q82C, QA71

Q67E

Q785

QA49
SPNDX
START
            0959
            0161
STS
            0002
SVC
SVKB
SWSC
SWSD
SWSE
            9688
919D
            0A56
0A65
            OASC
SWSET
SWSP
SWO
SW1
SW2
SW3
TACAR
TBLI
TBLIS
                             0672,068D,0443
            OA3D
            0A70
                            0A55
             05DF
            05DF
05E0
05E1
05E2
08FA
07E7
07E5
07E3
05E6
                             0651,0656,06A0,0728,082F,0A59,0A6C
                            084F,0A26
0811
07DE
07E2
0724
TBL IZ
TERM
TIMEX
TWIST
            09F3
                             0857
THLVE
            0641
                             060D,0671,0A4B
TYCOD
            0889
                             07D0
TYCUS
TYEND
            0643
                            OABE
                            0678,06C8
0744
05FC
            0876
TYPIT
TYPSV
            0750
           061E
090B
07AB
0008
UCASE
WRDCT
                            0850
0610,0666,07A6,07E8,0814
0750,07F6
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3. OPERATING PROCEDURE

THESE OPERATING PROCEDURES APPLY TO SINGLE PROGRAM OPERATION ONLY. FOR OVERLAP OPERATION, REFER TO SECTION 3.2.3 OF THE 1130 DIAGNOSTIC MONITOR II DOCUMENTATION.

3.1*** PROGRAM LOADING

STANDARD MONITOR LOADING PROCEDURES APPLY

THESE PROCEDURES ARE SUMMARIZED HERE. SEE DM USE PROCEDURE FOR DETAILS.

- 1. SET FIRST TYPEWRITER TAB 20 CHARACTERS FROM LEFT MARGIN.
- 2. SET BIT SWITCH 15 OFF LOAD AND GO

ON - TO HALT AFTER LOADING

IF HALT AFTER LOADING, SELECT PROGRAM OPTIONS THEN TURN OFF HALT SWITCH OR FOLLOW NORMAL RESTART PROCEDURE (SECTION 3.5).

- 3. LOAD DIAGNOSTIC MONITOR AND THIS PROGRAM.
- 4. SELECT PROGRAM OPTIONS, IF DESIRED. ****

3.2*** PROGRAM OPERATION.

- 3.2.1 PROGRAM CONTROL FUNCTION O
  - 1. SET SWITCHES 0-7 TO 01.
  - 2. SET SWITCHES 8-15 AS DESIRED.

SW	FUNCTION	THE REPORT OF THE PROPERTY OF
8	RESTART	 1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1
9	ROUTINE START MESSAGE	
10	LOCK ON FUNCTION	
11	LOOP PROGRAM	
12	LOOP ON ERROR	
13	BYPASS ERROR PRINTOUT	
14	HALT ON ERROR	
15	HALT	

3. PRESS INT REQ KEY ON CONSOLE. 

"最高的是有一个人的。" "我们就是一个人的,我们们的一个人的。"

ing and the street of the stre

心的Y断着设备车。1970

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## 1627 PLOTTER FUNCTION TEST

## 3.2.2 ROUTINE SELECTION - FUNCTION 1

THE SELECTED ROUTINE WILL LOOP UNTIL A NEW ROUTINE IS SELECTED OR ROUTINE SELECTION IS RESET.

- 1. TO SET ROUTINE SELECTION
  - A. SET SWITCHES 0-7 TO 41.
  - B. SET ROUTINE NUMBER IN SWITCHES 12-15.

RTN		DESCRIPTION		The state of the s
1 2 3 4•	*	PEN UP-PEN DOWN OCTAGON T REGISTRATION TEST SWING TEST STRESS TEST	EST.	NORMAL ROUTINES- THE PROGRAM STARTS WITH ROUTINE 1, RUNS EACH ROUTINE IN SEQUENCE THEN TERMINATES AFTER ROUTINE 4.
5•	*	SELECTION COMMAND	•	OPTIONAL ROUTINES THESE ROUTINES RUN ONLY IF SELECTED.

- * _ REFER TO SECTION 3.2.3 FOR SPECIAL INSTRUCTIONS.
- C. PRESS INT REQ KEY ON CONSOLE.
- 2. TO RESET ROUTINE SELECTION, SET AS IF SELECTING ROUTINE ZERO.

### 3.2.3 PROGRAM OPTION

ROUTINE 5 - SELECTION COMMAND

AFTER SELECTION BY FUNCTION 1, THE CONTROL COMMAND DATA IS TAKEN FIRST FROM BITS 0-5 AND THEN FROM 8-13.

ACTION OR MOTION	В	TS	
LOWER PEN TO PAPER	0	OR	8
UP (PAPER MOVES DOWN)	1		9
DOWN (PAPER MOVES UP)	2		10
R IGHT	3		11
LEFT	4		12
RAISE PEN FROM PAPER	5		13
****	*		

## 3.3*** PROGRAM HALTS

## 3.3.1 NORMAL HALTS

.HALT NO.	DESCRIPTION	•	RESTART • ACTION •
3001	PROGRAM STOP OR ADDRESS STO	Р.	PRESS START
3002	HALT ON ERROR	•	PDISPLAY MODE-PRESS START RUN MODE-PRESS START

### 3.3.2 ERROR HALTS

.HALT NO.	DESCRIPTION	RESTART ACTION
. 30F1	CHECK SUM ERROR ON FIRST CARD OF LOADER .	RELOAD
30F2 .	READER DSW ERROR WHEN	RELOAD
. 30F3	CARD 2 OF LOADER DID NOT LOAD	RELOAD
. 30F4 .	CAN NOT CLEAR CORE - DUE TO . ERROR IN ADDRESSING UPPER . CORE.	
30F5 .	READER CHECK WHEN LOADING MONITOR OR TEST PROGRAM	NPRO THEN PLACE CARDS RUN OUT IN FRONT OF REMAINING DECK AND PRESS START.
30F6 .	MONITOR DID NOT LOAD	RELOAD
30F7	CHECK SUM WHEN LOADING MUNITUR	RELOAD
30F8 .	READER NUT READY	MAKE READER READY
30F9 .	INVALID INTERRUPT WHICH WILL NOT RESET	PRESS RESET AND START
30FA .	CONSOLE PRINTER HANG UP - BUSY WILL NUT GO OFF	FIX THE CONSOLE PRINTER

## 3.4*** PROGRAM TERMINATION

IF LOOP PROGRAM HAS NOT BEEN SPECIFIED THE PROGRAM WILL TERMINATE AT THE END OF ROUTINE 4. ROUTINE 5 WILL ONLY RUN IF SELECTED.

IF ANY ROUTINE IS SELECTED THAT ROUTINE WILL LOOP AND WILL NOT TERMINATE.

# 3.5*** RESTART

- 1. SET SWITCHES 0-7 TO 01.
- 2. TURN ON SWITCH 8.
- 3. SET DESIRED CONTROL IN SWITCHES 9-14.
- 4. PRESS INTERRUPT REQUEST KEY.

*****

*****

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4. PRINTUUTS

1627 PLOTTER FUNCTION TEST

ALL PRINTUUTS ARE IN THE STANDARD FORMAT.

APPNN GORR AAAA

(MESSAGE)

EPPNN OGRR AAAA

(MESSAGE)

WHERE

A IDENTIFIES STATUS MESSAGES

E IDENTIFIES ERROR MESSAGES

PP IS THE PLD OF THE PROGRAM CAUSING THE MESSAGE

THIS WILL BE EITHER OO FOR MESSAGES ORIGINATED BY THE MONITOR OR OB FOR MESSAGES ORIGINATED BY THIS PROGRAM.

NN IS THE MESSAGE SEQUENCE NUMBER

KR IS THE ROUTINE NUMBER

AAAA IS THE ADDRESS OF THE ROUTINE

MESSAGE IS ANY VARIABLE INFORMATION

4.1*** STATUS MESSAGES

AOOOO

NUM PID ADRS RELF LD XXXX XXXX XXXX XXXX

THIS MESSAGE IS PRINTED FOLLOWING THE LOADING OF ANY PROGRAM (EXCEPT MONITOR), THE MESSAGE GIVES THE LOAD SEQUENCE NUMBER, THE PROGRAM ID. THE ADDRESS INTO WHICH THE PROGRAM WAS LOADED. AND THE RELOCATION FACTOR.

AUUCI

SWS PID XXXX XXXX

THIS MESSAGE IS PRINTED EACH TIME A VALID SWITCH ENTRY IS READ BY THE MONITUR. THE MESSAGE CONTAINS THE SWITCH SETTING READ TOGETHER WITH THE PROGRAM ID OF THE PROGRAM INTO WHICH THE CONTENTS OF SWITCHES 8-15 WERE STORED. IF THE SWITCH ENTRY CALLED FOR HALT OF ANY PROGRAM, THE WORD HALT WILL FOLLOW THE MESSAGE.

AUSCO OORR AAAA

ROUTINE START MESSAGE - IF SWITCH 9, FUNCTION 0, IS TURNED ON, THIS MESSAGE WILL BE PRINTED BEFORE THE START OF EACH ROUTINE. R IS THE NUMBER OF THE NEXT ROUTINE AND AAAA IS THE STARTING ADDRESS.

AUSCS CCRR

NRDY

PLCTTER POWER IS TURNED OFF.

AUSC8 OCRR

PROG HALT

INDICATES PROGRAM HAS BEEN HALTED BY BIT SWITCH 15 FUNCTION OO BEING SET ON. SET BIT 15 OFF TO CONTINUE.

4.2*** ERROR MESSAGES

1627 PLUTTER FUNCTION TEST

THE DSW IS CHECKED FOR ABSOLUTE CORRECTNESS AT ALL TIMES. IF AN ERROR IS DETECTED ONE OF THE MESSAGES BELOW WILL INDICATE THE PROBLEM. IT IS LEFT TO THE OPERATOR TO ANALYZE THE DSW FOR THE SPECIFIC PROBLEM AREA.

*		THE PLOTTER DSW	
<b>*</b>			
<b>*</b>			
*	BIT		
<b>k</b>	0	PLOTTER RESPONSE	
<b>*</b>	1	NOT USED	
ķ	2	NOT USED	
*	3	NOT USED	
*	4	NOT USED	
¥	5	NOT USED	
×	6	NOT USED	
*	7	NOT USED	
<b>*</b>	8	NOT USED	
*	9	NOT USED	
*	10		
*	-		
-	11	NOT USED	
*	12	NOT USED	
*	13	NOT USED	
۴	14	BUSY	
k	15	NOT READY	
<b>*</b>			

E0001

SWS INVLD XXXX

THE SETTING OF SWITCHES 4-7 DID NOT EQUAL THE LOAD SEQUENCE NUMBER OF ANY PROGRAM IN CORE.

E0003

OVR CORE

THE PROGRAM WHICH THE LOADER WAS ATTEMPTING TO LOAD EXCEEDED AVAILABLE CORE. LOADING WAS TERMINATED.

E0004

CKSUM

A CHECK SUM ERROR WAS DETECTED WHILE LOADING A TEST PROGRAM. THIS ERROR OCCURS UNDER ANY OF THE FOLLOWING CONDITIONS.

- 1. A CARD IS MISSING OR IS OUT OF SEQUENCE.
- 2. THERE IS AN EXTRA CARD IN THE DECK.
- 3. THE PUNCHED INFORMATION ON THE CARD IS NOT CORRECT.
- 4. DATA WAS LOST OR PICKED UP DUE TO A MACHINE MALFUNCTION.
- 5. DUE TO A CPU MALFUNCTION, THE CHECK SUM WAS NOT CORRECTLY CALCULATED.

WHEN THIS ERROR OCCURS ATTEMPT TO RELOAD THE PROGRAM.

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1627 PLOTTER FUNCTION TEST

E0005

OOON XXXX

THIS ERROR WILL OCCUR IS AN INTERRUPT OCCURS, BUT THE ILSW WAS NOT CORRECT. N IS THE INTERRUPT LEVEL AND XXXX IS THE ILSW. THIS PRINTOUT WILL ONLY OCCUR IF THE INTERRUPT IS RESET BY A BOSC. NO ATTEMPT IS MADE BY THE ERROR ROUTINE TO RESET THE REQUEST BIT.

E0501 000R AAAA

WAS S/B DSW XXXX 0000

STATIC DSW ERROR. THIS DSW IS SENSED BEFORE GIVING A CONTROL COMMAND TO THE 1627. ANY BITS ON INDICATE AN ERROR. IF BIT 15 IS ON (NOT READY), CHECK FOR 1627 POWER ON.

E0502 OOOR AAAA

WAS S/B BUSY DSW

XXXX 0002

BUSY DSW ERROR. THIS DSW WAS SENSED IMMEDIATELY AFTER A CONTROL COMMAND WAS GIVEN TO THE 1627. IT SHOULD SHOW THE 1627 BUSY. NO OTHER BITS SHOULD BE ON.

IF THIS ERROR OCCURS DURING OVERLAP SEE NOTE ON 1/0 TEST INDEX PAGE, P/N 2191291.

E0503 OOOR AAAA

DSW NO INTRPT XXXX

NO INTERRUPT WAS RECEIVED AFTER A CONTROL COMMAND TO THE 1627. THE DSW WAS SENSED AT LEAST 2 SECONDS AFTER THE 1627 COMMAND.

IF A BUSY DSW ERROR (E0502) IS ALSO INDICATED, THE CONTROL COMMAND WAS NOT RECEIVED BY THE 1627.

E0504 000R AAAA

WAS S/B INTRPT DSW

INTERRUPT DSW ERROR. THIS DSW WAS SENSED IN INTERRUPT. IT SHOULD SHOW THE RESPONSE BIT ON AND ALL OTHER BITS OFF.

5. COMMENTS

1627 PLOTTER FUNCTION TEST

5.1 *** ROUTINE 1 ( PEN UP-PEN DOWN OCTAGON TEST )

THE PURPOSE OF THIS ROUTINE IS TO TEST THE CAPABILITY OF THE PLOTTER TO EXECUTE THE PEN UP AND PEN DOWN PLOTTER COMMANDS. IN THIS ROUTINE, AS IN THE OTHER PLOTTER PATTERN GENERATING ROUTINES, AN ADDRESS TABLE IS USED TO SELECT THE CORRECT PLOTTER COMMANDS. THE ADDRESS TABLE, IN TURN, POINTS TO A PAIR OF COMPUTER WORDS. ONE WORD CONTAINS A NUMBER WHICH INDICATES THE NUMBER OF TIMES THE OTHER WORD ( THE PLOTTER COMMAND ) IS TO BE EXECUTED.

THE PATTERN PLOTTED IN THIS FUNCTION TEST CONTAINS TWO ADJACENT OCTAGONS, WHOSE SIDES ARE ONE AND ONE HALF INCHES IN LENGTH. OCTAGON NO. 1 ( LEFTMOST OCTAGON ) IS PLOTTED IN A CLOCKWISE DIRECTION. OCTAGON NO. 2 ( RIGHTMOST OCTAGON ) IS PLOTTED IN A COUNTER CLOCKWISE DIRECTION.

THIS ROUTINE IS DESIGNED SO THAT, IF A PEN UP COMMAND IS NOT EXECUTED AS IT SHOULD BE, A LINE WILL BE DRAWN IN THE INNER PORTION OF THE OCTAGON. IF A PEN DOWN COMMAND IS NOT EXECUTED, A SIDE OF THE OCT-AGON WILL BE MISSING. FIGURE 1 SHOWS AN EXAMPLE OF THE OUTPUT OF THIS ROUTINE.

5.2*** ROUTINE 2 REGISTRATION TEST

THE FUNCTION OF THIS ROUTINE IS TO DETERMINE IF ANY ADJUSTMENTS ARE NEEDED IN THE PEN OR DRUM MOVEMENT MECHANISMS. FIGURE 2 SHOWS THE PATTERN GENERATED BY THIS ROUTINE. IF ANY OF THE LINES FAIL TO INTERSECT, MECHANICAL ADJUSTMENT OF THE PLOTTER IS NECESSARY.

5.3*** ROUTINE 3 SWING TEST

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THE PURPOSE OF THIS ROUTINE IS TO TEST THE ABILITY OF THE PLOTTER TO PLOT LONG LINE SEGMENTS IN VARIOUS DIRECTIONS. THE PATTERN GENERATED BY THIS ROUTINE IS SO DESIGNED, THAT IF PLOTTER COMMANDS ARE NOT EX-ECUTED OR EXTRA COMMANDS ARE EXECUTED, THE CORNERS OF THE PATTERN WILL NOT JOIN. THIS TEST WILL ALSO SHOW UP ANY MALADJUSTMENT IN THE PEN OR DRUM MECHANISM.

THE METHOD USED IN GENERATING THE PATTERN IS AS FOLLOWS.

- A. THE LEFT AND TOP SIDES OF A SERIES OF SQUARES ARE DRAWN AS A CONTINUOUS LINE, VARYING IN SIZE FROM 10 TO 2 INCHES.
- B. THE RIGHT AND BOTTOM SIDES OF THE SERIES OF SQUARES ARE DRAWN IN ONE QUARTER INCH LINE SEGMENTS, JOINED TOGETHER, AND TOTALING THE LENGTH OF THE LEFT AND TOP SIDES.
- ON COMPLETING THE PLOTTING OF THE SQUARES, LINES ARE DRAWN ( BOTH SEGMENTED AND CONTINEOUS ) THRU THE CORNERS OF THE SQUARES. ALL OF THESE DIAGONAL LINES SHOULD INTERSECT THE CORNERS OF THE SQUARES PERFECTLY.

FIGURE 3 SHOWS THE PLOTTER PATTERN GENERATED BY THIS ROUTINE.

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1627 PLOTTER FUNCTION TEST

5.4*** ROUTINE 4 STRESS TEST (WINDMILL PATTERN)

> THE PURPOSE OF THIS ROUTINE IS TO EXERCISE ALL OF THE MECHANICAL FUNCTIONS OF THE PLOTTER. THIS OBJECTIVE IS ACCOMPLISHED BY PLOT-TING A PATTERN OF TRIANGLES, ROUGHLY RESEMBELING A WINDMILL. EACH SIDE OF THE TRIANGLE CONSISTS OF A SERIES OF SHORT SAWTOOTH-LIKE SEG-MENTS, NHICH TESTS THE ABILITY OF THE PLOTTER TO PLOT SHORT LINE SEGMENTS WITH ABRUPT CHANGES IN DIRECTION. A SET OF FIVE TRIANGLES IS PLOTTED, THE AXIS IS THEN ROTATED 90 DEGREES AND FIVE MORE TRI-ANGLES ARE PLOTTED IN THE SAME MANNER UNTIL, FINALLY, FOUR SETS OF TRIANGLES HAVE BEEN PLOTTED. WHEN THE TRIANGLES HAVE BEEN PLOTTED. A LINE IS DRAWN THRU THE INNERMOST POINTS OF THE TRIANGLES. THE RE-SULTANT PATTERN THEN APPEARS AS A WINDMILL WITH A DIAMOND SHAPED PATTERN CONNECTING THE INNER POINTS OF THE TRIANGLES. THE DIAMOND DESIGN SHOULD INTERSECT ALL OF THE INNER POINTS OF THE TRIANGLES IF THE PLOTTER IS ADJUSTED CORRECTLY. FIGURE 4 SHOWS THE PLOTTER PAT-TERN GENERATED BY THE ROUTINE.

## 5.5*** ROUTINE 5 SELECT COMMAND

ROUTINE 5 WILL NOT RUN UNLESS SELECTED. THIS ROUTINE ALLOWS THE FIELD ENGINEER TO EXECUTE ANY DESIRED COMBINATION OF TWO PLOTTER COMMANDS. ONE COMMAND IS SET IN SWITCHES 0-5, THE OTHER IS SWITCHES 8-13. THE SWITCHES ARE READ DIRECTLY BY THIS ROUTINE. THUS ANY CHANGE IN SWITCH SETTING WILL RESULT IN AN IMMEDIATE CHANGE IN THE COMMAND. THE PROGRAM WILL RUN IN THIS ROUTINE UNTIL ANOTHER ROUTINE IS SELECTED.

### o. APPENDIX

THE FOLLOWING PAGES CONTAIN THE PLOTTER OUTPUT PATTERNS.

FIG. 1 PATTERN FOR PEN UP/PEN DOWN TEST

FIG. 2 PATTERN FOR REGISTRATION TEST

FIG. 3 SWING TEST PATTERN

FIG. 4 STRESS TEST WINDMILL PATTERN

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1627 PLOTTER FUNCTION TEST

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FIGURE 1

PATTERN FOR PEN UP/PEN DOWN TEST

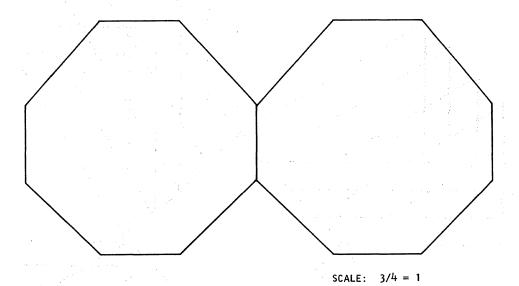
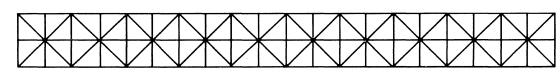


FIGURE 2

PATTERN FOR REGISTRATION TEST



SCALE: 3/4 = 1

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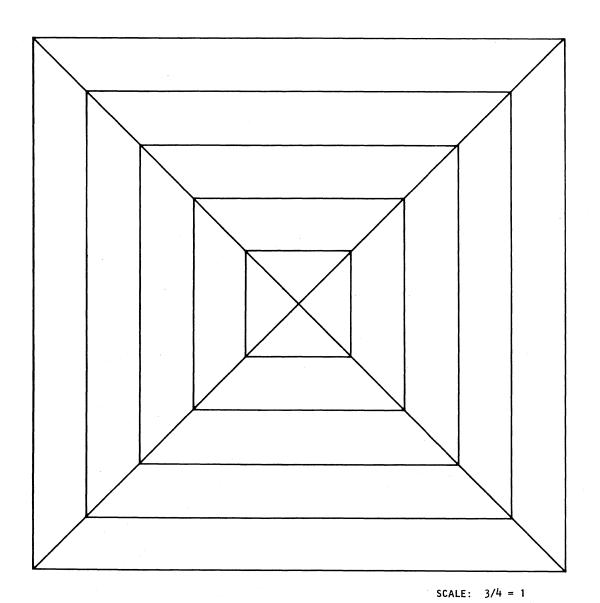
1627 PLOTTER FUNCTION TEST

FIGURE 4

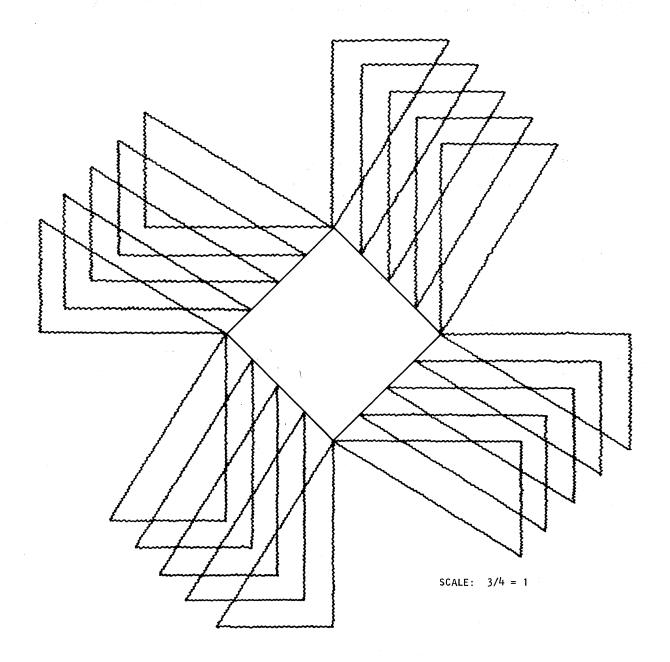
FIGURE 3

1627 PLOTTER FUNCTION TEST

SWING TEST - PATTERN



STRESS TEST - WINDMILL PATTERN



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#### 300 MONITOR 334 KB/PRINTER 1627 PLOTTER 309 DISK F.T. 30B PAPER TAPE 30C 1132 PRINTER 2191221 314 1231 OMPR 2243554 300 1403 PRINTER 2243557 318 SCA PROGRAM INSTRUCTION 2191297 ONLY SCA TEST FOR OVERLAP 30E 2501/1442 - V 2243551 EITHER PROGRAM BUT 30F 1442 - VI. VII 2191225 NOT BOTH

### WILL NOT OVERLAP WITH ANY OTHER SCA PROGRAM AVAILABLE FOR CARD INPUT ONLY

#### MONITOR CONTROLLED 1/0 TEST NORMAL OPERATION SUMMARY

P/N 2191291

- 1. FOR PAPER TAPE-MOUNT MONITOR TAPE IN TAPE READER AND MAKE READY. (THE RELOCATING LOADER IS AHEAD OF MONITOR ON THE MONITOR TAPE). PRESS STOP, RESET AND PROGRAM LOAD, MONITOR WILL LOAD AND STOP FOR LGADING THE NEXT 1/0 TEST TAPE MOUNT HEXT 1/0 TAPE, SET SWS O AND 8 ON FOR SINGLE 1/0 TEST OR SWS 0,8,9 AND 15 ON FOR OVERLAP, AND THEN PRESS INTERRUPT REQUEST KEY. BRANCH TO ITEM 3.
- 2. FOR CARD SYSTEM-PLACE RELOCATING LOADER, FOLLOWED BY MONITOR II AND I/O TESTS IN THE DESIRED RUN SEQUENCE IN THE CARD READER AND MAKE READER READY.
  - A. TO RUN TESTS ON AN INDIVIDUAL TEST BASIS, PLACE A BLANK CARD AFTER EACH I/O TEST DECK.
  - TO RUN TESTS IN OVERLAP MODE, PLACE A BLANK CARD AFTER THE LAST 1/0 TEST DECK.
  - C. TO STOP MONITOR AFTER ALL PROGRAMS ARE LOADED, PLACE BIT SW 15 ON BEFORE LOADING. PRESS STOP'S RESET AND PROGRAM LOAD
- 3. A STATUS MESSAGE WILL PRINT OUT AFTER EACH 1/0 TEST IS LOADED. THIS MESSAGE WILL INDICATE LOADING SEQUENCE NUMBER OF THE TEST, THE PROGRAM ID (PID) NUMBER, THE STARTING GODRESS IN STORAGE AND THE RELOCATION FACTOR.
- 4. CONTROL OPTIONS MAY BE ENTERED AT ANY TIME. THIS IS FUNCTION O AND IS EFFECTIVE WHEN BIT SWITCH O AND I ARE OFF. IF BIT SWITCHES 4,5,6 AND 7 ARE OFF MONITOR IS ADDRESSED BUT WHEN THESE SWITCHES ARE SET TO A LOADING SEQUENCE NUMBER, THAT I/O TEST IS BEING ADDRESSED. CONTROL OPTIONS AND SWITCH SETTINGS ARE:
  - 8 RESTART 10 - LOCK ON FUNCTION
- 12 LOOP ON ERROR (ONCE PER ERROR)
- 14 HALT ON ERROR

- 9 PRINT RTN ID 11 LOOP ON PROGRAM
  - 13 BYPASS ERROR PRINT OUT
- 15 HALT
- 5. TO STOP ALL PROGRAMS, PRESS PROGRAM STOP, MONITOR WILL WAIT (3001) AT ADDRESS 040C.
- 6. TO RESTART AFTER PROGRAM STOP, PRESS PROGRAM START. MONITOR HAS SAVED THE STATUS OF TESTS.
- 7. TO STOP ANY ONE PROGRAM (WHILE OVERLAPPING), SET BIT SWS TO ONO! AND PRESS INT. REQ. KEY. N=LOAD SEQUENCE NUMBER
- 8. TO RESTART ANY ONE PROGRAM, SET BIT SWS TO ONSO AND PRESS INTERRUPT REQUEST KEY. N = LOAD SEQUENCE NUMBER
- 9. ERROR TYPE OUTS ARE EXPLAINED IN SECTION 4.2 OF EACH I/O DESCRIPTION.
- 10. AS EACH TEST REACHES ITS NORMAL END A MESSAGE WILL BE TYPED OUT. FOR EXAMPLE XXXX END, WHERE XXXX = PID.

NOTE: THERE ARE TIME DEPENDENT DEVICES WHICH MUST BE SERVICED WITHIN A SPECIFIED TIME LIMIT AFTER AN INTERRUPT OCCURS. IF THESE LIMITS ARE NOT COMPLIED WITH, DATA WILL BE LOST BETWEEN THE PRO-CESSOR AND THE 1/0 DEVICE. THESE TYPES OF ERRORS OCCUR WHEN ANOTHER DEVICE'S PROGRAM KEEPS CONTROL IN MAINLINE OR INTERRUPT ROUTINE FOR EXTENDED PERIODS OF TIME.

PROGRAMS WITH A HIGH RATE OF INTERRUPTS MAY CAUSE OTHER PROGRAMS TO LOSE MAINLINE CONTROL. THIS LOSS OF CONTROL BETWEEN AN XIO READ, WRITE OR CONTROL AND AN XIO SENSE DEVICE MAY CAUSE FALSE DSW ERRORS. THIS TYPE OF ERROR SAYS THE DEVICE SHOULD HAVE BEEN BUSY AND NOT READY. THE PROBLEM IS THE DEVICE HAS COMPLETED IT'S OPERATION, DROPPED BUSY AND BROUGHT UP READY BEFORE CONTROL WAS REGAINED BY THE PROGRAM INDICATING THE ERROR.

IF ANY OF THE TYPES OF ERRORS ABOVE ARE SUSPECTED IN OVERLAP, RUN THE FAILING TEST ALONE TO CHECK FOR TRUE ERRORS.

### 1/0 SIMMARY TARIF

PROGRAM	PROG ID NO	CORE SIZE	OVER-	RUN TIME	SPECIAL INSTRUCTIONS
RELOCATING LOADER - 1442	_3 <b>A</b> A	340	BASIC	-	CARD I SADER FOR MONITOR II
RELOCATING LOADER 2501	3AB	340	BASIC	-	CARD LOADER FOR MONITOR II
RELOCATING LOADER PAPER TAPE	3AC	346	BASIC	-	PAPER TAPE LOADER IN FRONT OF MONITOR !! ON PAPER TAPE.
MONITOR II	300	1160	BASIC	-	PROVIDES BASIC CONTROL FOR ALL I/O PROGRAMS.
KEYBOARD PRINTER	304	1200	YES	3 MIN	FOR MANUAL KEYBOARD TESTS SEE SECTION 3.2.3.
1627 PLOTTER (SEE NOTE)	305	950	YES	6 MIN	FOR MANUAL CONTROL SEE SECTION 3.2.3.
DISK INITIALIZATION	308	2300	NO	5 MIN	USE ONCE TO INITIALIZE FE DISK PACK.
DISK FUNCTION TEST	309	2350	YES	3 MIN	USE ONLY DISKS WHICH HAVE BEEN INITIALIZED.
PAPER TAPE	30B	750	YES	2 MIN	TAPE MAY BE REPRODUCED BY FUNCTION I AND RTN 4.
1132 PRINTER	30C	2200	YES	4 MIN	USE CARRIAGE TAPE WITH 16 OR FEWER PUNCHED HOLES.
1442 FUNCTION TEST	30F	1400	YES	NOT FIXED	ROUTINE 1-PUNCH AND FEED WILL PUNCH ONLY INTO BLANK CARDS.
1442 TIMING TEST	32F	1650	NO.	NOT FIXED	ENTER 1442 MODEL-8105,8106 OR 8107.
SCA INSTRUCTION F.T.	318	1600	YES *	5 MIN	NO RESET FAST PASS OPTION RUNS ONE (1) MINUTE.
SCA WRT/RD BUF, LINE NOISE DET.	311	1550	YES *	11 HIN	BUFFER TEST 30 SECONDS AND LINE LISTENING 10.5
SCA WRAP-AROUND TEST	319	1800	NO	5 MIN	NG RESET, FAST PASS OPTION ONE MINUTE
S CA TRANSMIT/RECEIVE	313	2050	NO	NOT FIXED	TWO MINUTES IS MIN. OPTIONAL TIME INDEFINITE
SCA DISPLAY PROGRAM	315	37 <b>5</b> 5	₩0	NOT FIXED	LOAD WITH RELOCATING LOADER
2501/1442 - 5 F.T.	30E	1405	YES	NOT FIXED	
1231 OPTICAL MARK PAGE RDR F.T.	314	900	YES	NOT FIXED	USE CONTROL SHEET
1403 F.T.	30D	1400	YES	3 HIN	USE CARRIAGE TAPE CALLED OUT IN SECTION 5.3
SCA-BSC-PT-TO-PT	317	2500	NO	NOT FIXED	
SCA-BSC-MULTI-PT	31A	2500	NO	NOT FIXED	

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PAPER TAPE READER/PUNCH FUNCTION TEST			PAPER TAPE READER/PUNCH FUNCTION TEST	
All the Table Hall Committee (All the Hall the		) <b>)</b>	· 400 - Mitter Changer (Adv. Changer Leville) - Anderson (Adv. Changer Changer) - Anderson (Adv. Changer Changer	ျားသည်။ နောက်လျှော်သည်။ ကြောင်းသည်။ ကြောင်းသည်။
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PARAGRAPH	PAGE		THESE OPERATING PROCEDURES APPLY TO SINGLE PROGRAM OF FOR OVERLAP OPERATION, REFER TO SECTION 3.2.3 OF THE	
1. PURPOSE	• • •		DIAGNOSTIC MONITOR II DOCUMENTATION.	1130
2. PREREQUISITES		) )	3.1*** PROGRAM LOADING	
2.2 EQUIPMENT PREREQUISITES	PARE CONTRACTOR CONTRA	<b>7</b>	FOR THE CONVENIENCE OF 'READER ONLY' SYSTEMS, THE TEST OF THE PAPER TAPE PROGRAM TO SENTIFIED BY COMPARING WITH THE SAMPLE TAPE. SECTION	APE AND MAY BE
3. OPERATING PROCEDURE		<b>)</b>	STANDARD MONITOR LOADING PROCEDURES APPLY	
3.1 PROGRAM LOADING 3.2 PROGRAM OPERATION 3.2.1 PROGRAM CONTROL - FUNCTION 0 3.2.2 ROUTINE SELECTION - FUNCTION 1		<b>)</b> )	THESE PROCEDURES ARE SUMMARIZED HERE. SEE DM USE PRODETAILS.	
3.2.3 PROGRAM OPTIONS 3.3 PROGRAM HALTS 3.3.1 NORMAL HALTS 3.3.2 ERROR HALTS		<b>j</b> ,,, ,	1. SET FIRST TYPEWRITER TAB 20 CHARACTERS FROM LEFT 2. SET BIT SWITCH 15 OFF - LOAD AND GO ON - TO HALT AFTER LOADING	MARGIN.
3.4 PROGRAM TERMINATION 3.5 RESTART  4. PRINTOUTS		<b>3</b> 5	IF HALT AFTER LOADING, SE OPTIONS THEN TURN OFF HAL FOLLOW NORMAL RESTART PRO (SECTION 3.5).	LT SWITCH OR
4.1 STATUS MESSAGES		<b>.</b>	(SECTION 3.5).  3. LOAD DIAGNOSTIC MONITOR AND THIS PROGRAM.	
4.2 ERROR MESSAGES 5. COMMENTS		3 )	4. SELECT PROGRAM OPTIONS, IF DESIRED.	
5.1 TEST NO. 1 (PUNCH TEST)		3 3	3.2*** PROGRAM OPERATION.	
5.2 TEST NO. 2 (READER TEST). 5.3 TEST NO. 3 (PUNCH/READ/COMPARE TEST) 5.4 TEST NO. 4 (REPRODUCE-TAPES TEST)	entre de la companie de la companie La companie de la co		3.2.1 PROGRAM CONTROL - FUNCTION 0	All the second of the second
5.5 TEST NO. 5 ( PUNCH BIT SWS TEST )			1. SET SWITCHES 0-7 TO 01. 2. SET SWITCHES 8-15 AS DESIRED.	•
6. APPENDIX	• • •	3 3	SW FUNCTION	
6.1 SAMPLE TAPE		1 2	8 RESTART	<del></del>
1. PURPOSE			9 ROUTINE START MESSAGE 10 LOCK ON FUNCTION	
THE FUNCTION TEST IS DESIGNED (1) TO TEST FOR PROPER OPERAT		3 3	11 LOOP PROGRAM 12 LOOP ON ERROR	
PAPER-TAPE STATUS INDICATORS AND (2) TO TEST FOR ACCURATE D BY THE PAPER-TAPE READER AND PAPER-TAPE PUNCH WHEN OVERLAPE OTHER ELEMENTS OF THE 1130 SYSTEM. THIS TEST MAY ALSO BE US TAPES.	ED WITH	1 3	13 BYPASS ERROR PRINTOUT 14 HALT ON ERROR 15 HALT	
2. PREREQUISITES		<b>3</b> 3	3. PRESS INT REQ MEY ON CONSOLE.	
2.1*** PROGRAM PREREQUISITES		3 3		
1130 DIAGNOSTIC MONITOR II		• •		
2.2*** EQUIPMENT PREREQUISITES		3 )		
<ol> <li>1131 CPU WITH PROGRAM LOAD FROM EITHER CARD OR P</li> <li>1134 PAPER TAPE READER AND/OR 1055 PAPER TAPE PU</li> <li>AT LEAST 750 WORDS OF AVAILABLE CORE STORAGE.</li> </ol>		2 , 5	en de la companya de La companya de la co	
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3.2.2 ROUTINE SELECTION - FUNCTION 1

THE SELECTED ROUTINE WILL LOOP UNTIL A NEW ROUTINE IS SELECTED OR ROUTINE SELECTION IS RESET.

- 1. TO SET ROUTINE SELECTION
  - A. SET SHITCHES 0-7 TO 41.

B. SET ROUTINE NUMBER IN SWITCHES 12-15.

RTN DESCRIPTION PUNCH PATTERN NORMAL ROUTINES-READ PATTERN THE PROGRAM STARTS WITH PUNCH AND READ PATTERN ROUTINE 1, RUNS EACH

ROUTINE IN SEQUENCE THEN TERMINATES AFTER ROUTINE 3.

REPRODUCE TAPE OPTIONAL ROUTINES PUNCH BIT SWITCH SETTING THÈSE ROUTINES RUN ONLY IF SELECTED.

- * = REFER TO SECTION 3.2.3 FOR SPECIAL INSTRUCTIONS.
- C. PRESS INT REQ KEY ON CONSOLE.
- 2. TO RESET ROUTINE SELECTION. SET AS IF SELECTING ROUTINE ZERO
- 3.2.3 PROGRAM OPTIONS
  - 1. PUNCH FROM BIT SWITCHES

ROUTINE 5 PUNCHES ALTERNATELY FROM SWITCHES 0-7 AND SWITCHES 8-15. AFTER THE ROUTINE IS SELECTED, SET THE DESIRED PATTERN IN THESE SWITCHES.

2. RE ALIGN PAPER TAPE

TO REALIGN THE PAPER TAPE AT ANY TIME DURING RUNNING OF THE PROGRAM -

A. SET SWITCHES TO 8180

B. PRESS INT REG. KEY.

3.3*** PROGRAM HALTS

3.3.1 NORMAL HALTS

		HALT NO.	DESCRIPTION	RESTART ACTION
3.5	A	. 3001 . PROGRAM	STOP OR ADDRESS STOP	PRESS START
	\$ 15 mg	STROBER SECTIONS	ERROR	DISPLAY MODE PRESS START. RUN MODE - PRESS START
Z =	ভৱা চিত্র		20 P 00 to 21 11 8 to 40 to 4	

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PAPER TAPE READER/PUNCH FUNCTION TEST

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3.3.2 ERROR HALTS

HALT NO. (B REG).	DESCRIPTION	RESTART ACTION
30F1	CHECK SUM ERROR ON FIRST CARD OF LOADER	RELOAD
30F2 .	READER DSW ERROR WHEN	RELOAD
30F3 .	CARD 2 OF LOADER DID NOT	RELOAD
30F4 ·	CAN NOT CLEAR CORE - DUE TO . ERROR IN ADDRESSING UPPER CORE.	
30F5 .	READER CHECK WHEN LOADING MONITOR OR TEST PROGRAM	NPRO THEN PLACE CARDS RUN OUT IN FRONT OF REMAINING DECK AND PRESTART.
30F6 .	MONITOR DID NOT LOAD	RELOAD
30F7 .	CHECK SUM WHEN LOADING MONITOR	RELOAD
30F8 .	READER NOT READY	MAKE READER READY
30F9 :	INVALID INTERRUPT WHICH WILL NOT RESET	PRESS RESET AND START
30FA	CONSOLE PRINTER HANG UP - BUSY WILL NOT GO OFF	FIX THE CONSOLE PRINTER

3.4*** PROGRAM TERMINATION

IF LOOP PROGRAM HAS NOT BEEN SPECIFIED THE PROGRAM WILL TERMINATE AT THE END OF ROUTINE 3. ROUTINE 4 AND 5 WILL ONLY RUN IF SELECTED.

. IF ANY ROUTINE IS SELECTED THAT ROUTINE WILL LOOP AND WILL NOT TERMINATE.

3.5+++ RESTART

1. SET SWITCHES 0-7 TO 01.
2. TURN ON SWITCH 8.
3. SET DESIRED CONTROL IN SWITCHES 9-14.

4. PRESS INTERRUPT REQUEST KEY. *******

BETH TYPE BY COMPANYOUS TRUE OF BYOUR THANK PROCESS WERE WERE USED BY BUR THE CONSEMIGUES OF SPENCES DOLYS SYSSIBLE THE TISY STITCHES NAS

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	E READER/PUNCH FUNCTION TEST	PAGE 0003	3	3	PAPER TAPE READER/PUNCH FUNCTION TEST	PAGE	0003A
THE THE		en e	3	3	ARTHUR DE GREEN CONTRACTOR OF THE SERVICE OF A PROPERTY.	er a min	
		•	_		A CARANTA A CONTRACTOR AND A CARANTA A C		
4. PRINT	OUTS A CONTRACT OF A CONTRACT		2	3	* THE PAPER TAPE DSW		
ALL PI	RINTOUTS ARE IN THE STANDARD FORMAT.		5	3	*	; ;	
APPNN DOR	R AAAA (MESSAGE):				◆ BIT     ◆ O PARITY ERROR     ◆	i i	
EPPNN OOR	R AAAA (MESSAGE)		ا د	3	* 1 READER SERVICE * 2 NOT USED	, ,	
	WHERE A IDENTIFIES STATUS MESSAGES E IDENTIFIES ERROR MESSAGES		ا د	1	* 3 PUNCH SERVICE *  * 4 READER BUSY *	1 1	
	PP IS THE PID OF THE PROGRAM CAUSING THE MES. THIS WILL BE EITHER OO FOR MESSAGES	SAGE		•	+   5   READER NOT READY     +   6   Punch Busy	tografia	
	ORIGINATED BY THE MONITOR OR OB FOR MESSAGES ORIGINATED BY		3	3	* 7 PUNCH NOT READY * * 8 NOT USED *	: :	
	THIS PROGRAM.		3	n. . <b>▼</b>	* 9 NOT USED * * 10 NOT USED *	) 	
	NN IS THE MESSAGE SEQUENCE NUMBER	·		•	* 11 NOT USED * 12 NOT USED *		
	RR IS THE ROUTINE NUMBER  AAAA IS THE ADDRESS OF THE ROUTINE		3	3	* 13 NOT USED * 14 NOT USED *	; !	
	MESSAGE IS ANY VARIABLE INFORMATION		,	•	* 15 NOT USED *	; !	
4.174	* STATUS MESSAGES		,		**************************		
A0000	NUM PID ADRS RELF LD XXXX XXXX XXXX		3.	<b>. .</b>	E0001 SWS INVLD		
	THIS MESSAGE IS PRINTED FOLLOWING THE LOADING OF ANY PRO		<b>)</b>	· <b>)</b>	THE SETTING OF SWITCHES 4-7 DID NOT EQUAL THE LOAD SEQUENCE		
	(EXCEPT MONITOR), THE MESSAGE GIVES THE LOAD SEQUENCE NUTTHE PROGRAM ID. THE ADDRESS INTO WHICH THE PROGRAM WAS LOAD.			4	NUMBER OF ANY PROGRAM IN CORE.		
	AND THE RELOCATION FACTOR.		3	· <b>)</b> .	FOODS		
A0001	SWS PID		3.	ב ב	E0003 OVR CORE		
	XXXX XXXX			2	THE PROGRAM WHICH THE LOADER WAS ATTEMPTING TO LOAD EXCEEDED AVAILABLE CORE. LOADING WAS TERMINATED.		
and the second	THIS MESSAGE IS PRINTED EACH TIME A VALID SWITCH ENTRY IS BY THE MONITOR. THE MESSAGE CONTAINS THE SWITCH SETTING	READ	ا ر	; <b>)</b>			
	TOGETHER WITH THE PROGRAM ID OF THE PROGRAM INTO WHICH TO CONTENTS OF SWITCHES 8-15 WERE STORED. IF THE SWITCH EN	TRY	)	· <b>ງ</b>	E0004 CKSUM		
	CALLED FOR HALT OF ANY PROGRAM, THE WORD HALT WILL FOLLOW MESSAGE.	I THE	_	٠ _	A CHECK SUM ERROR WAS DETECTED WHILE LOADING A TEST PROGRAM THIS ERROR OCCURS UNDER ANY OF THE FOLLOWING CONDITIONS.		
		<b>1</b>	7	. <b>)</b>	1. A CARD IS MISSING OR IS OUT OF SEQUENCE.		
AOBOO OOR			7	)	3. THE PUNCHED INFORMATION ON THE CARD IS NOT CORRECT.		
	ROUTINE START MESSAGE - IF SWITCH 9, FUNCTION 0, IS TURN THIS MESSAGE WILL BE PRINTED BEFORE THE START OF EACH RO			. <del></del>	4. DATA WAS LOST OR PICKED UP DUE TO A MACHINE MALFUNCTION 5. DUE TO A CPU MALFUNCTION, THE CHECK SUM WAS NOT	l <b>e</b>	
+ 1 * * * * * * * * * * * * * * * * * *	R IS THE NUMBER OF THE NEXT ROUTINE AND AAAA IS THE STAR ADDRESS.		٠,	<b>כ</b>	CORRECTLY CALCULATED.	utat distribution	
				٦	WHEN THIS ERROR OCCURS ATTEMPT TO RELOAD THE PROGRAM.		
AOBOL OOR	R AAAA TAPE ALIGNED		I	. <b>.</b> 	E0005 OOON XXXX		•
	THE PAPER TAPE TEST RECORD IS ASSUMED TO BE PROPERLY ALL READER AT THIS TIME. THIS MESSAGE IS RECEIVED ONLY AFTER				THIS ERROR WILL OCCUR IS AN INTERRUPT OCCURS, BUT THE ILSW		
	SPECIFICATION OF REALIGN TAPE OPTION.		.,	•	WAS NOT CORRECT. N IS THE INTERRUPT LEVEL AND XXXX IS THE ILSW. THIS PRINTOUT WILL ONLY OCCUR IF THE INTERRUPT IS RE	SET	
4 2==	* ERROR MESSAGES		'	, ,	BY A BOSI. NO ATTEMPT IS MADE BY THE ERROR ROUTINE TO RESE THE REQUEST BIT.		
70677		IE AM	7	כ	THE REQUEST DITA		
الراجع الما	THE DSW IS CHECKED FOR ABSOLUTE CORRECTNESS AT ALL TIMES ERROR IS DETECTED ONE OF THE MESSAGES BELOW WILL INDICAT	THE			EOBOL OORR AAAA XXXX OXOO		
	PROBLEM. IT IS LEFT TO THE OPERATOR TO ANALYZE THE DSW ( SPECIFIC PROBLEM AREA.	PUR THE	, )	כ	DSW ERROR AFTER READER-CONTROL COMMAND		
			, 1	)			•
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PART NO. 2191234 IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PAGE 0004 PAPER TAPE READER/PUNCH FUNCTION TEST EGBO2 OORR AAAA XXXX OXOO DSW ERROR AFTER PUNCH COMMAND EOBO3 OORR AAAA XXXX OFOO DSW ERROR AFTER READER-CONTROL AND PUNCH COMMANDS EOBO4 OORR AAAA XXXX OXOO DSW ERROR WHEN CHECKING FOR READER-READY EOBDS OORR AAAA XXXX OXOO DSW ERROR WHEN CHECKING FOR PUNCH-READY EOBO6 OORR AAAA XXXX 4000 READER SERVICE-REQUEST DSW ERROR E0807 OORR AAAA XXXX 1000 PUNCH SERVICE-REQUEST DSW ERROR EOBOS DORR AAAA XXXX 5000 DSW ERROR WHEN PUNCH AND READER INTERRUPTS RECEIVED AT SAME TIME EOBO9 OORR AAAA XXXX XOOO DSW ERROR WHEN FIRST INTERRUPT WAS RECEIVED. AT THIS TIME BOTH THE READER AND THE PUNCH ARE BEING RUN UNDER RACE CONDITIONS. THE DSW FOR THE DEVICE THAT INTERRUPTS FIRST, IS ANALIZED FIRST. ANY ERROR WILL BE PRINTED AS AN EOBO9. SIMILARLY FOR THE SECOND INTERRUPT. AN ERROR WILL BE PRINTED AS EOB10. EOBIO OORR AAAA XXXX XOOO DSW ERROR WHEN FIRST INTERRUPT WAS RECEIVED. AT THIS TIME BOTH THE READER AND THE PUNCH ARE BEING RUN UNDER RACE CONDITIONS. THE DSW FOR THE DEVICE THAT INTERRUPTS FIRST IS ANALIZED FIRST. ANY ERROR WILL BE PRINTED AS AN EOBO9. SIMILARLY FOR THE SECOND INTERRUPT. AN ERROR WILL BE PRINTED AS EOBIO. EOB11 OORR AAAA XXXX OXOO NO READER INTERRUPT RECEIVED. I XXXX IS THE LAST DSW SENSED IMMEDIATELY AFTER THE READER-CONTROL COMMAND. EOB12 OORR AAAA XXXX OXOO "NO PUNCH INTERRUPT RECEIVED (XXXX IS THE LAST DSW SENSED IMMEDIATELY

AFTER THE READER-CONTROL COMMAND )

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PAPER TAPE READER/PUNCH FUNCTION TEST EOB13 OORR AAAA XXXX OFOO NO PUNCH OR READER INTERRUPT (XXXX IS THE LAST DSW SENSED IMMEDIATELY AFTER THE READER-CONTROL AND PUNC COMMANDS) EOB14 OORR AAAA DATA ERR 3 XXOO XXOO READ/COMPARE ERROR (RDR BUFFER CHANGED)
DATA (XXOO) PRINTED AS ENTERED IN CORE - CHANNELS 8-1 RESPECTIVELY ) EOB15 OORR AAAA DATA ERR XXOO XXOO READ/COMPARE ERROR ( RDR BUFFER UNCHANGED) DATA (XXOO) PRINTED AS ENTERED IN CORE - CHANNELS 8-1 RESPECTIVELY XXXX OGOO XXOO EOB16 OORR AAAA READER-DSW READ ERROR WHEN REPRODUCING TAPES. IF TAPE STOPPED, THE FIRST CHARACTER BEYOND THE READ STATION WAS PERHAPS IMPROPERLY READ. THIS CHARACTER HAS NOT AS YET BEEN PUNCHED. BACK THE READER UP ONE CHARACTER AND PRESS START ON THE P-C. DATA (XXOD) PRINTED AS ENTERED IN CORE - CHANNELS 8-O RESPECTIVELY. READ READ 1ST 2ND . ) XXOO XXOO CONSECUTIVE READ ERROR DATA (XXOO) SHOULD AGREE. EOB19 OORR AAAA XXOO YYOO THE PROGRAM COULD NOT ALIGN THE TAPE IN THE READER IN THE LAST 500 CHARACTERS. THE PROBLEM IS. A. DPEN DATA CHANNEL(S). XXOO SHOULD BE FFOO, WHICH IS THE CHARACTER THAT WOULD BE PLACED IN CORE BY READING AN ALL-BITS CHARACTER. ANY MISSING BIT(S) INDICATE THE OPEN DATA CHANNEL(S). B. SHORTED DATA CHANNEL(S). YYOO SHOULD BE 0000, WHICH IS THE CHARACTER THAT HOULD BE PLACED IN CORE BY READING A NO-BITS CHARACTER. ANY BIT(S) PRESENT INDICATE THE SHORTED CHANNEL(S). C. IF BOTH XXOD AND YYOO ARE CORRECT. 1. THE TAPE IS NOT IN THE READER CORRECTLY, OR 2. THE READER CANNOT READ THE FIRST 8 CHARACTERS PROPERLY. IF SO. TRY ONE OF THESE. A. TRY RUNNING THE REPRODUCE TAPE ROUTINE (ROUTINE 4).

B. TRY MANUALLY ALIGNING THE TAPE IN THE READER. THEN SPECIFY THE MANUAL TAPE ALIGNMENT OPTION (TABLE O) AND RESTART THE PROGRAM. EOB2O OORR AAAA XXXX

A SPURIOUS OR NON-RESETABLE INTERRUPT HAS BEEN RECEIVED.

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PAPER TAPE READER/PUNCH FUNCTION TEST

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#### 5. COMMENTS

THE FUNCTION TEST CONSISTS OF THREE NORMAL ROUTINES AND THO OPTIONAL ROUTINES. NORMALLY, ROUTINES ONE THROUGH THREE ARE RUN IN ORDER. ALL ROUTINES ARE DESCRIBED IN PARAGRAPHS 5.1 THROUGH 5.5. THE FUNCTION TEST,

- A. CHECKS DSW FOR PROPER BITS BEFORE ISSUING WRITE (PUNCH) OR CONTROL (READER) COMMANDS.
- B. CHECKS DSW FOR CORRECTNESS AFTER XIO INSTRUCTION.
- C. CHECKS FOR INTERRUPT FROM DEVICE WITHIN SPECIFIED TIME LIMIT.
- D. CHECKS DSW AFTER INTERRUPT IS RECEIVED.
- 5.1*** ROUTINE NO. 1 (PUNCH TEST)

TEST NO. 1 CHECKS THE OPERATION OF THE PAPER-TAPE PUNCH WHILE PUNCHING TWO TEST RECORDS. THE RECORD INCLUDES A RIPPLE PATTER! AND AN ALL-CHARACTER PATTERN. (REFER FIGURE 1).

#### 5.2*** ROUTINE NO. 2 (READER TEST)

THIS TEST CHECKS THE OPERATION OF THE PAPER TAPE READER WHILE READING ONE RECORD PRODUCED BY THE PUNCH TEST. THE TAPE IS NORMALLY AUTOMATICALLY ALIGNED IN THE READER BY READING EIGHT CONSECUTIVE CHARACTERS CORRECTLY. A MESSAGE IS PRINTED WHEN THE TAPE IS PROPERLY ALIGNED. IF DESIRED, THE UPERATOR CAN MANUALLY PLACE THE TAPE IN THE THE READER ON THE FIRST CHARACTER OF THE RIPPLE PATTERN AND SPECIFY THE MANUAL ALIGNMENT OPTION AS IN TABLE O. THE TAPE MAY ALSO BE REALIGNED IN THE READER AT ANY TIME.

EACH CHARACTER READ IS COMPARED WITH A WORD IN STORAGE. AN UNEQUAL COMPARE WILL CAUSE AN ERROR TYPEOUT. SEE 4.2. THERE WILL BE BE ONE ERROR TYPEOUT FOR EACH READ/COMPARE ERROR.

THESE ERROR PRINTOUTS MAY INDICATE THE TAPE IS NOT IN THE PROPER POSITION IN THE READER. THE TAPE MAY BE MANUALLY ADJUSTED IN THE READER OR THE OPERATOR MAY SELECT REALIGN TAPE. (TABLE 0)

## 5.3*** ROUTINE NO. 3 (PUNCH/READ/COMPARE TEST)

THIS TEST CHECKS THE FUNCTION AND RELIABILITY OF THE PAPER TAPE READER AND PUNCH WHEN OPERATED TOGETHER. BOTH DEVICES ARE OPERATED AT THE SAME SPEED. THE DATA READ IS COMPARED WITH THE DATA PUNCHED IN A NEW TAPE. THIS TEST ALSO HAS THE TAPE ALIGNMENT FEATURE OF TEST NO. 2. THE TEST IS COMPLETE AFTER ONE RECORD HAS BEEN PROCESSED.

## 5-4*** ROUTINE NO. 4 (REPRODUCE-TAPES TEST)

THE OPERATOR HAS THE OPTION OF REPRODUCING ANY TAPE. THE OPERATOR MUST SPECIFY HALT ON ERROR OPTION IN MONITOR CONTROL TABLE O. AGAIN, ALL DEVICE STATUS CHECKING DONE IN TESTS NOS. 1 AND 2 IS INCLUDED IN THIS TEST. ALSO, A DSW ERROR WHEN READING THE TAPE WILL CAUSE A DELAY OF THE PROGRAM UNTIL THE OPERATOR CAN INTERVENE, OTHER THAN EOLG IS PRINTED PRESS START AND THEN VERIFY THAT THE PROPER PUNCHES ARE OBTAINED. SEE SPECIFIC ERROR MESSAGE FOR AID IN INSTRUCTIONS.

### 5.5*** ROUTING NO. 5 (PUNCH BIT SWITCH IMAGE)

THIS ROUTINE PUNCHES THE DATA ENTERED IN THE BIT SWITCHES. THE ROUTINE WILL ALTERNATELY PUNCH FROM SWITCHES 0-7 THEN SWITCHES 8-15.

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PART NO. 2191234 PAPER TAPE READER/PUNCH FUNCTION TEST 6. APPENDIX SAMPLE TAPE 3 FIGURE 1 SHOWS AN EXAMPLE OF A PAPER TAPE RECORD. 3 00000 000000 00000 000000 00000 3 (3) ) .) ) ري ) 3 ) 3 ) 7 **つ** 7 7 7 0 DATE 02JAN66 01MAY66 15N0V66 PROG ID 030B-≭ 15 June 67

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PAPER TAPE READER/PUNCH FUNCTION TEST

PAPER TAPE READER/PUNCH FUNCTION TEST

******	******	*****	*******	30B00030
	*	• • • • • • • • • • • • • • • • • • • •		30800040
		EEDING CHAN	GE REFLECTS MAJOR	30800050
		_		30800060
				30800070
		NOT KUN WI	TH DIAGNOSTIC MONITOR II.	
•	*			30B00080
	* THIS TEST	WILL NOT RU	N WITH PREVIOUS MONITORS.	30B00090
	*			30B00100
•	* TESTS PRID	R TO EC 419	643 CATEC NOV 15, 1966.	30800110
:	# WILL NOT C	PERATE PROP	ERLY WITH DIAGNOSTIC	30B0 <b>0120</b>
	* MONITOR II			30B00130
•	*	· .		30B00140
	•	*****	*****	
			*********	30800160
			_	30B00170
	*	EQUATE TAB		30860180
1		A CONTRACTOR OF THE CONTRACTOR	*******	
			TEST PREGRAM LABELS	30B00190
	* TO THEI	R EQUIVALEN	T DIAGNOSTIC MONITOR	30B00200
	<ul><li>ADDRESS</li></ul>	ES.		30800210
	*		•	30800220
0160	BEGIN EQU	/160	BEGIN ROUTINE	30800230
	START EQU	BEGIN+1	SUPERVISOR ROUTINE	30800240
	ERROR EQU	START+1	ERRCR LCG ROUTINE	30B00250
	LOG EQU	ERROR+1	STATUS LOG ROUTINE	30800260
			END ROUTINE	30800270
0164	END EQU	L <b>0</b> G+1	END ROOTING	30B00280
	¥		00 A000 CCC C	•
	* MONITOR	CUNTRUL WU	RD ADDRESSES	30B00290
	•			30B00300
0165	RTNSW EQU	END+1	ROUTINE START SWITCH	30B00310
0166	ERLCK EQU	END+2	LOCK ON ERROR CONTROL	30800320
	LDGBY EGU	END+3	I/C BUSY SW ADR	30B00330
	RLCF EQU	END+4	RELOCATION FACTOR ADR	30800340
0100	*			30800350
	* INTERRU	DT TRANSFER	VECTOR ADDRESSES	30800360
	*	. I INANSIEN	TECTOR ADDITEDOES	30800370
		/174	INTERRUPT LEVEL ZERG	30800380
	ILO EQU	/17A		30800390
	ILI EQU	1L0+16	INTERRUPT LEVEL ONE	
0194	IL2 EQU	IL1+16	INTERKUPT LEVEL TWO	30800400
Olaa .	IL3 EQU	IL2+16	INTERRUPT LEVEL THREE	30800410
018A	IL4 EQU	IL3+16	INTERRUPT LEVEL FOUR	30800420
	ROTY EQU	IL4+1	TYPR SVC REQUEST INTERPT	30B00430
	RQKB EQU	RQTY+1	KEYBOARD REQUEST INTERPT	30800440
	SVKB EQU	RQKB+1	KEYBOARD SERVICE INTERPT	30800450
			*******	30B00460
	ORG	*+15C0		30800470
0000	UKG	-T1700	•	30300410
	<del>-</del> 			30B00490
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	*		OSTIC MONITOR *	30B00500
	*		ONTRCLLED *	30800510
	<b>*</b>		PAPER TAPE TEST +	30800520
	********	******	*******	30800530
	*			30B00540
	*	PREG	RAM STATUS TABLE	30B00550
	• •			30800560
		/030B	PROGRAM ID NUMBER	30800570
				30800580
	RID DC	/0000	ROUTINE NUMBER	
	RAD DC	/0000	ROUTINE ADDRESS	30800590
	SWO DC	/0000	FCN 0 - CONTROL	30800600
<b>05EU 0 0000</b>	SW1 DC	/0000	FCN 1 - INITIAL RTN	30800610
05E1 0 0000	SW2 DC		NOT USEC	30800620
	SW3 DC	/0000	PUNCH SWS WORD	30800630
05E3 1 0647	DC	LOGP	LOOP PROGRAM ADDRESS	30B00640
05E4 1 0634	DC	RESRT	INITIALIZATION ADDR	30800650
	MLSCF DC	*-*	MAIN LINE SEQ CNTL	30800660
			HALF CAME OF A PILL	30800670
05E6 1 0634	DC	RESAT	FOUNTED ENTRY	30BG0680
05E7 0 0U00	DC	/0000	COUNTER ENTRY	
	TERM DC	/FFFF	TERMINATOR	30800690
	*******	********	******	30800700

				*					30800710
			s.f	*					30BG0720
			5	*			*		30B00730
				*			INTF	RRUPT RCUTINE	30B00740
				*			••		30800750
				*	•				30600760
O	5E 9	o	0000	POINT	DC		<b>/</b> 0000		30B00770
			CC00074C		XIO	L	XICSD	SENSE DSW	30800780
	5EC		D036		STO		DSWIT		30800790
0	5ED	01	6780062E		LDX	13	INTEX		30600800
. 0	5EF	01	4F300625		8 S C	13	HANDL-1	BR TO PROPER CHECK	30800810
			•	*					30800820
C	5F1	01	F7000628	SINT	ECR		INTEX-3	CHECK SINGLE INTRPT	30800830
			E780062E		AND		INTEX		30B0U840
			4C18061C		B SC	L		BR IF DSW OK	30800850
			6700075F		LDX	L3	NIPES	SVC REC ERROR	30800860
0	15F9	0	7024		MDX		PINT1	And the second second	30800870
_			E030	*	ċ or		THIED	CK DEH EDD 3 CHC DEC	30800880 30800890
	5FA		F030	DINT	EDR		INTED	CK DSW FDR 2 SVC REC BR IF 2ND DOUBLE INT	30800900
			4000000	DIA TI	BSC	L	/0000	BR IF 2ND DOUBLE INT CK FIRST INTERPT DSW	30B00910
	5FD		D02B	DINTI			DSWDI	CK PIKST INTERPT DSW	30800920
	SFE.		E02C		AND STO		INTED	and the second s	30800930
	SFF.		D02A		BSC	L	DSWID DINT4.Z	EXIT IF ONLY ONE REC	30B00940
			4C200610 C026		LD	L	DSWDI	EXTT IF CHET CHE REC	30800950
	602		4C18061C		BSC	L		BR IF DSW CK	30800960
			67000769		LDX		DINEL	PRINT DSW ERROR NEXT	30800970
_	607		7016		MDX		PINT1		30800980
~		•	1010	* .					30800990
0	608	0	E821	DINT2	DR		DSWID	CHECK SECOND INTRPT DSW	30801000
	609		D019		STC		DSWIT	•	30801010
	60A		F020		EDR		INTED		30801020
				*			* **		30B01030
0	60B	01	4C18061C		B SC	L	PINT3,+-	BR IF DSW CK	30801040
0	60D	01	6700076E		LDX	L3	DINEZ		30801050
0	60F	0	<b>7</b> 00E		MDX		PINTL		30801060
		•	•	*					30801077
				*					30801080
	610		1340	DINT4		. 3	0		30801090
	611		1001		SLA		1		30801100
	612		D011		STO		BUMRO	ZERC IF NO IEQ BIT	30801110
	613		67000608		LDX		DINTZ	SET SECOND INT SW	30801120
	615		6BE6		STX	3	DINT1-1		30B01130 30B01140
U	616	U	700A		MDX		XIT		30801150
^	417	ο.	47000755	EINT	LDX	12	SPUR	SPURRICUS OR NON-	30801160
			67000755 6F0005E5	EINI	STX		MLSCF	RESETABLE INTERRUPT	30B01170
	618		<b>70</b> 05		MDX	LJ	XIT	RESCHADEL INTERNOT	30801180
·	010	•	7005	*	1107		^* '		30801190
n	610	01	6700077D	PINT3	I DX	13	DINE	DSW DK - RET TO MLINE	30801200
	61E		6BC7	PINTI			MLSCF+1	The state of the s	30801210
•				*	• • • • • • • • • • • • • • • • • • • •	·		•	30801220
0	61F	0	6300		LDX	3	0	RESET INTRPT EXPECTED	30R01230
	620		680D		STX	3	INTEX		30B01240
				*			*		30801250
0	621	01	4C8005E9	XIT	B S C	. I	-POINT	BUG DUT	30801260
				****	****	***	*****	******	30B01270
				*					30801280
	623		0000	DSWIT			/000C	LAST INTERRUPT DSW	30801290
	624		0000	BUMRQ			/0000		30801300
0	625	1	0617		DC		EINT	************	30B01310
_		_		*				INTERRUPT BR ADRS	30861320
	626		05F1	HANDL			SINT	PUNCH INTR CK ADRS	30801330
	627		05F1		DC		SINT	RDR INTER CK ADAS	30801340
	628		05FA	0000	DC		DINT	RDR-PUNCH INT CK	30B01350
	629		0000	DSWDI			<b>/0000</b>	IDENTIFY INT YET EXP	30801360
U	62A	U	0000	D SWID	J		/0000	ADENTALT INT. TEL CAP	30801370 30801380
				. •					20001300

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PAPER TAPE READER/PUNCH FUNCTION TEST

## PAPER TAPE READER/PUNCH FUNCTION TEST

0628 062C 062D 062E 062F 0630	0 4000 0 1000 0 0000 1 0748	INTED DO 000 000 000 000 000 000 000 000 000	/4000 /1000 /0000	ROR-PCH SVC REQ EXP ROR SVC REQ PCH SVC REQ INTERRUPT EXPECTED 1 = READER • 2 = PUNCH 3 = BCTH	30801390 30801400 30801410 30801420 30801430 30801440
062C 062D 062E 062F 0630	0 4000 0 1000 0 0000 1 0748	# # EC	/4000 /1000 /0000	ROR SVC REC PCH SVC REQ INTERRUPT EXPECTED 1 = READER - 2 = PUNCH 3 = BOTH	30801400 30801410 30801420 30801430 30801440 30801450
062F 062F 0630	0 1000 0 0000 1 0745	# # # EC	/1060 /0006	PCH SVC REQ INTERRUPT EXPECTED 1 = READER • 2 = PUNCH 3 = BCTH	30801410 30801420 30801430 30801440 30801450
062F 0630	0 000t 1 0748	* * * * * * * * * * * * * * * * * * *	/0006	INTERRUPT EXPECTED  1 = READER •  2 = PUNCH  3 = BOTH	30801420 30801430 30801440 30801450
062F 0630	1 0748	*		1 = READER • 2 = PUNCH 3 = BCTH	30B01430 30B01440 30B01450
0630 <b>0631</b>		* : E C	. RMASK	2 = PUNCH 3 = BOTH	30801440 30801450
0630 <b>0631</b>		÷ . E.C ∴ E.C	RMASK -	3 = (BCTH)	30801450
0630 <b>0631</b>		£ 0	RMASK -		
0630 <b>0631</b>		:: E·C	· KUMON	READER	- 30B01460
<b>0</b> 631	1 0149		XMASK	PUNCH	30B01470
				FUNCT	30801410
		*******		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	30801490
				*****	30801500
	2014 200140				
0633	00:4460016C	PTEGN ES		TOTAL TOTAL TOTAL	7: 30B01510
	1 05DC	0.0		700. 0. 120	30801520
d tv - v		******	****	*****	30801530
	1 4 4 m	H 19 <b>₽</b> 1000			30801540
		-	NITIAL PROGRAM	ENTRY POINT	30801550
		\$ <b>*</b>			30B01560
0634		RESRT LE		RESET TAPE ALIGN WCRDS	30B01570
0635	01 6E0007E7	S1	X L2 CORCT	the following of the property of the state o	30B01580
0637	01 C400U5E1	F.0	L Sh2		30B01590
0639	0 1810	SF	RA 16		30B01600
063A	01 D40007E8	S1	TO L NIST		-30B01610
		1995 🚁 (1992) 199	The state of the s		30801620
063C	0 6103	LE LE	X . 1 3	RESTORE ERROR WD CNT	30B01630
063D	01 60000819	. S1	IX L1 EME'SG+2		30801640
		Surphy Home Control	1000 000 000 000	Committee of the Commit	30B01650
063F	00 6500030E	L C	X L1 782	RESTORE FOR 2 PU RCCS	30801660
	01 60000685	S1	TX L1 RTN1I+1	o presidenti e di la Sala di S	30801670
	01 650005E9		X LI PCINT	SET INTERRUPT TRAP	30801680
	00 6D0001BA	SI	X L1 IL4	VECTOR	30801690
				*******	30801700
		*			30B01710
		*			30B01720
		*	ROUTINE CONTROL	LLER	30B01730
		*			30B01740
		1 1 🛊 1 1 1 1 1 1 1 1 1		in the State of th	30801750
		* THIS	ROUTINE CHECKS	SWITCHES AND CONTROLS	30801760
				EST ROUTINES ARE RUN.	30801770
3 N N		* 35.40.			30B01780
0647	0 1010	L'OOP SI	A 16	RESET ROUTINE NUMBER	30801790
0648		51 S1			30801800
0040	0 0034	*			30801810
0640	01 C40005E0	CNTRL LO	L SW1	the company of the company of	30801820
0648		SI			30801830
	01 4C080658	B :		BR IF NC RTN SELECTO	30801840
0646	01 40080658	D:	SC E CN20,+	DK IF NE KIN SELECIE	30801850
	01 04000100	C412.0 C1	rn . n.n	SAVE NEW RTN NUMBER	30801860
	01 D40005DD	CN10 S1		SAVE NEW KIN NUMBER	
0650		S	RIDCK	DD TE WALTE DEN	30801870
	01 4C08065F	89		ER IF VALID RTN	30801880
0653		SF		TO THURSD DEVICE	30801890
	01 D400G5E0	SI		IF INVALID RTN GO	30801900
0656	01 D40005DD		TO L RID		30801910
		*			30801920
	01 74010500	CN20 MI		ADV TO NEXT RIN	30801930
-	O C021	L.C			30801940
G65A					
G65A G65B	01 9400C5DD	y to 1 <b>*</b> ≥ 1 10 1 1 2 1 1	The card of the Calabara of the	大湖南,黄芩、黄芩西水木黄,木、、水、、枣、枣、甘甘仁。	
G65A G65B	01 9400C5DD				30801970
G65A G65B		*			
G65A G65B		в:	I I END,+		30801980
G65A G65B	e e no nest tent e espe Total e en e	- e	។ ខុចម៉ាស់សុទ្ធិ ១១ម៉ូលា	THE REPORT OF STREET	30801990
G65A G65B	e e no nest tent e espe Total e en e	- e	n vogsvik eekei XValikidi /kk	ମଧ୍ୟ ଅଧିକ୍ୟ ପର୍ମ ଅଧିକ୍ୟା । ୧୯୮୭ ଅଧିକ୍ୟ ପ୍ରମଧ୍ୟ ଅଧିକ୍ୟା ।	
065B 065B	00 44880164	6: ************************************	1: 1548839 AAQAS XXXXIIIRID: 219 )	FMIR MIRROLDI MARVIÇA AKT DORIO MAR THI FRAM SET ROUTINE ADDRESS	30B01990 30B02000 30B02010
065B 065B	00 4488U164 01 658UNSDD	6: ************************************	1: 1548839 AAQAS XXXXIIIRID: 219 )	ମଧ୍ୟ ଅଧିକ୍ୟ ପର୍ମ ଅଧିକ୍ୟା । ୧୯୮୭ ଅଧିକ୍ୟ ପ୍ରମଧ୍ୟ ଅଧିକ୍ୟା ।	30B01990 30B02000
065B 065B 065D 065F 0661	00 4488U164 01 658UNSDD	* 100 150 183 * 200 950 * CN25 161 * LI * * 100 30	11 156883	FMS & TOLDAR DOLLARDS CORREST OF BUILDING CORREST OF BUILDING ADDRESS OF BUILDING BU	30B01990 30B02000 30B02010
065B 065B 065D 065F 0661	00 4488U164 01 658U05DD 01 C500G67D	# 12	10 L RAD 10 C L RAD 10 L RAD 10 L RAD 10 L RAD 10 L RAD	FMI & MILEN DILLO BLOOD CONTROL OF SAME  SET ROUTINE ADDRESS A MILEN BLOOD CONTROL OF SAME  SET SETSMESCENTRY NOW NEED CONTROL OF SAME SAME SAME SAME SAME SAME SAME SAME	30801990 30802000 30802010 30802020
065B 065B 065D 065F 0661 0663 0665	00 4488U164 01 658U05DD 01 C500G67D 01 D40005DE	# 12	10 L RAD 10 C L RAD 10 L RAD 10 L RAD 10 L RAD 10 L RAD	FMI & MILEN DILLO BLOOD CONTROL OF SAME  SET ROUTINE ADDRESS A MILEN BLOOD CONTROL OF SAME  SET SETSMESCENTRY NOW NEED CONTROL OF SAME SAME SAME SAME SAME SAME SAME SAME	30801990 30802000 30802010 30802020 30802030
065A 065B 065D 065F 0661 0663 0665 0667	00 44880164 01 658005DD 01 C500G67D 01 D40005DE 01 6700066E	6	10 L RAD  13 C L RAD  13 C L RAD  14 C L RAD  15 L RAD  16 L RAD  17 L RAD  18 L RAD	FMS & TOLDAR DOLLARDS CORREST OF BUILDING CORREST OF BUILDING ADDRESS OF BUILDING BU	30801990 30802000 30802010 30802020 30802030 30802040

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PAGE		2

	haya e dha	e de la companya de				
066B 0 6	00.3		CTV 1	CN30+1	SAVE IX 1	30802070
066C 00 4				START	GO TO MONITOR	30802080
U66E U0 6		CN30			RESTORE IX 1	30B02090
0670 0 6				ŏ	RESTORE CHAR RTN	30802100
0671 01 6				DULP+1		30B02110
0673 0 6			LDX 3	The state of the s	and the second s	30B02120
0674 01 6				DULP-1		30B02 <b>130</b>
		*		na na Naka		30.802 <b>140</b>
0676 00 6	7000187		LDX L3	391	SET RECORD LENGTH	3080215 <b>0</b>
0678 01 6		44.	STX L3	WRECK		30B02 <b>160</b>
	7.34	*				30B02 <b>170</b>
067A 01 4	D80067D	11 191			BR TO RCUTINE	
		*****	*****	*****	*******	30B02 <b>190</b>
		<b>*</b>	12.00	nergy and a North	Control of Artist Administration (1)	30B02200
4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	and the second s	<b>*</b>	-	for the contract of	and a second	30B02210
067C 0 0		RTNOM		NRTN-RTTBI		30802220
067D 0 0		RIDCK	DC ;	LRTN-RTTBI		30802230
		*			<u>tijang p</u> amalan tilang angkatika	30802240
				E ADDRESS	TABLE	30802250
the April 1997 of the Artist		*	Y 2.3			30802260
		•	NL	RMAL ROUTI	VES THE TRANSPORT OF THE SECOND	30B02270
•		*				30802280
		*	0.0	0.74.3.7	DIMEN DOUTTHE	30802290
067E 1 U	A CONTRACTOR OF THE CONTRACTOR	RTTBL		RTN1I	PUNCH ROUTINE	30802300
	691				REACER RTN	30B02310 30B02320
0680 1 0	1699	NRTN	ישני	RTN3	PCH + RCR CHECK	30B02320 30B02330
100		<b>∓</b>	ODTION	AL ROUTINES	5	30802330
		* :	OPITUN	IAL RUUTINE		30802340
0681 1 0	)6A4		DC		REPRODUCE TAPE	30802360
		LRTN :		RTN5A	PCH BIT SW DATA RTN	
0002 1 0		*		N. N. N. J.	TON DIT ON DATA KIN	30B02380
0683 0 0		SWCMP	nc	10000	SW1 COMPARE WORD	30802390
0005 0 0					************	30802400
	, · · · .	*		and the second second		30802410
		*		• •		30802420
		*		MAIN	LINE ROUTINES	30802430
		*				30B02440
		*				30802450
4 3 3		*	1	<b>KOUT INE</b>	1 - PUNCH TEST	30802460
		*			Sangalay nahing basa sa ba	30802470
0684 00 6				782	SET FOR 2 RECORDS	30802480
0686 0 6				WRECK		30802490
0687 00 6					CNE RECORD NEXT TIME	30802500
0689 0 6				RTN11+1		30802510
068A 01 4		RTN1		MARK	BUILD NEXT CHARACTER	30802520
068C 0 4			BSI	XKRDY	PUNCH READY	30802530
068D 01 4				PUNH	PUNCH ONE CHARACTER	30B02540
0.05.0				3	**************************************	30802550 308025 <b>60</b>
068F 0: 4	• • •	RTNIA		CRASH	***************	30802570
0400 0 7			MDX	with the second	NC - RETURN	30B02580
0690 0 7		*	HUA	RTN1	NO, RETURN	30802590
		*		POUT INF	2 - READER TEST	30802600
en e			ri Vita di Salay	KOOT THE	Z READER TEST	30802610
0691 01 4			BSI L	MARK	BUILD NEXT CHARACTER	30802620
0693 0 4			BSI		READER READY	30802630
0694 0 7			MDX		CONTROL READER	30802640
0695 01 4		RTN2A			READ AND COMPARE	30802650
0697:0:4					CK IF END ROUTINE	30802660
0698 0 7			MDX	RTN2	NC - RETURN	30B02670
2007 C 200				100 4 5		30802680
					y fix y a thom	30802690
şes II. <b>Ş</b> öt	yn Till sjel	★ para Para		ROUTINE	3 - PCH-RD + COMPARE	30802700
	g - 1	*				30B02710
0699 01 4			BSI L		BUILD NEXT CHARACTER	30802720
	044		BSI		PUNCH READY	30802730
069C 0 4	059		BSI	RRDY	READER READY	30B02740
	ing.					* 8000.0440

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SY	STER
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PAPER TAPE READER/PUNCH FUNCTION TEST

PART NO. 2191232 PAGE 3

PAPER TAPE READER/PUNCH FUNCTION TEST

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PART ND. 2191232 PAGE 3A

0690 01	4C00071B	100	B SC	L	XFEED	PUNCH + CONTROL RDR	30802750
	4400071B	RTN3A			RDIT	READ AND COMPARE	30B02760
	4036		BSI	_	CRASH	CK IF END OF ROUTINE	30802770
06A2 U			MDX		RTN3	NC - RETURN	30802780
OURE U	10.2						30802790
06A3 0	0000	WRECK	DC.		/0000	RECCRD LENGTH COUNTER	30802800
00.5	0000					******	30802810
100		*	* 1,			•	30802820
		*	Ç**		ROUTINE	4 - REPRO PAPER TAPE	30802830
					;:		30802840
06A4 0	4051	RTN4I	BSI		RRDY		30802850
06A5 0	7066		MEX		FEED		308028 <b>60</b>
		*					30802870
06A6 01	C40005E0	RTN4	LD	Ł	SW1		30802880
06A8 C			ECR		SHCMP		30B02890
06A9 01	40200647		BSC	L	LOOP,Z	BR IF END THIS RTN	30802900
O6AB O	4034		BSI		XKRDY	PUNCH READY	30B02910
OGAC O	4049		851		RRDY	READER READY	30BU2 <b>920</b>
06AD 01	4C000715		BSC	L	XFEED	PUNCH + CONTROL RDR	30802 <b>930</b>
		* '					30802940
06AF 01	UC000744	RTN4A	XIO	L	XICRR	READ ADA BUFFER	30B02 <b>950</b>
0681 01	C400081E		LD	L	CARED	PLACE CHAR READ IN	30802960
06B3 01	D400081F		STO	L	XCHAR	OUTPUT AREA	30802970
06B5 O	10A0		SLT		32		30802 <b>980</b>
06B6 01	0C00U74U			, F	XIOSD	SENSE DSW	30802990
0688 01	4C1006A6		BSC	L	RTN4,-	BR IF NO DSW ERRORS	30803000
		*					30803010
06BA 0	6116		LDX		/0016	PRINT RDR ERROR	30803020
06BB 0			LDX	_	7		30803030
	44000809		BSI		PRDSW	PRINT THE ERROR	30803040
06BE 01	6E000819	• • • • .	STX	L2	EMESG+2		30803050
		*					30803060
06C0 0	4035		BSI		RRDY	READER READY	30B03070
06C1 0	704A		MDX		FEED	CONTROL READER	30B03080
		-	MAN				20202000
		*	MDX		RTN4	******	30B03090
		*		***		*******	30803100
		*		***		*******	30B03100 30B03110
		*		***	******		30B03100 30B03110 30BC3120
		* *		***	******	- PUNCH FROM BIT SWITCHES	30B03100 30B03110 30BC3120 30BU3130
		*		***:	******		30B03100 30B03110 30BC3120
0602 00	<b>6700</b> 0000	* * * *	****		**************************************		30B03100 30B03110 30BC3120 30B03130 30B03140
	67000000 0000746	* * * * * * RTN5A	***** LDX	L3	ROUTINE 5		30B03100 30B03110 30B03120 30B03130 30B03140 30B03150
06C4 01	00000746	* * * *	***** LDX		ROUTINE 5	- PUNCH FRCM BIT SWITCHES	30B03100 30B03110 30BC3120 30B03130 30B03140 30B03150 30B03160
06C4 01 06C6 01		* * * * * * RTN5A	LDX XIO	L3 L L	ROUTINE 5	- PUNCH FRCM BIT SWITCHES	30B03100 30B03110 30BC3120 30B03130 30B03140 30B03150 30B03160 30B03170
06C4 01 06C6 01 06C8 0	0C000746 C4000754	* * * * * * RTN5A	LDX XID LD SLA	L3 L L	ROUTINE 5  /OOOO RDBS BITSW	- PUNCH FRCM BIT SWITCHES	30B03100 30B03110 30BC3120 30B03130 30B03140 30B03150 30B03160 30B03170 30B03180
06C4 01 06C6 01 06C8 0 06C9 01	0C000746 C4000754 1300	* * * * * * RTN5A	LDX XIO LD SLA	L3 L L	ROUTINE 5  /OOOO RDBS BITSW	- PUNCH FROM BIT SWITCHES REAC THE BIT SWITCHES	30B03100 30B03110 30BC3120 30B03130 30B03140 30B03150 30B03160 30B03170 30B03180 30B03190
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0	0C000746 C4000754 1300 D400081F	* * * * * * RTN5A	LDX XIO LD SLA STO	L3 L L	ROUTINE 5  /OOOO RDBS BITSW O XCHAR	- PUNCH FROM BIT SWITCHES REAC THE BIT SWITCHES	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03180 30B03190 30B03200 30B03210 30B03220
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0	0C000746 C4000754 1300 D400081F C <i>0</i> F7	* * * * * * RTN5A	LDX XID LD SLA STO LD BSC LDX	L3 L L 3 L	ROUTINE 5  /OOOO RDBS BITSW O XCHAR RTN5A+1	- PUNCH FROM BIT SWITCHES REAC THE BIT SWITCHES	30B03100 30B03110 30BC3120 30B03130 30B03140 30B03150 30B03160 30B03170 30B03180 30B03190 30B03200 30B03210 30B03220 30B03220
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0	0C000746 C4000754 1300 D400081F C <i>0</i> F7 4830	* * * * * * RTN5A	LDX XIO LD SLA STO LD BSC LDX BSC	L3 L L 3 L	ROUTINE 5  /0000 RDBS B1TSW 0 XCHAR RTN5A+1 -2 0	- PUNCH FROM BIT SWITCHES REAC THE BIT SWITCHES	30B03100 30B03110 30BC3120 30BU3130 30B03140 30B03150 30B03160 30B03170 30B03180 30B03190 30B03200 30B03210 30B03220 30B03220 30B03230 30B03240
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0 06CD 0	0C000746 C4000754 1300 D400081F CØF7 4830 6300	*  *  *  RTN5A RTN5B	LDX XID LD SLA STO LD BSC LDX BSC LDX	L3 L 3 L	ROUTINE 5  /0000 RDBS BITSW 0 XCHAR RTN5A+1 -2 0 + 8	- PUNCH FROM BIT SWITCHES REAC THE BIT SWITCHES	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03180 30B03190 30B03210 30B03210 30B03220 30B03230 30B03230 30B03230 30B03240 30B03250
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0 06CC 0 06CE 0 06CF 0	0C000746 C4000754 1300 D400081F C0F7 4830 6300 4808 6308 6508	* * * * * * RTN5A	LDX XIO LD SLA STO LD BSC LDX BSC LDX STX	L3 L 3 L 3	ROUTINE 5  /0000 RDBS B1TSW 0 XCHAR RTN5A+1 -2 0 + 8 RTN5A+1	- PUNCH FROM BIT SWITCHES REAC THE BIT SWITCHES	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03180 30B03190 30B03210 30B03210 30B03220 30B03230 30B03240 30B03250 30B03250
06C4 01 06C6 01 06C8 0 06C8 0 06CB 0 06CC 0 06CD 0 06CE 0 06CF 0 06CF 0	0C000746 C4000754 1300 D400081F COF7 4830 6300 4808 6308 6852 C40005E0	*  *  *  RTN5A RTN5B	LDX XIO LD SLA STO LD BSC LDX BSC LDX STX LD	L3 L 3 L 3	ROUTINE 5  /0000 RDBS BITSW O XCHAR RTN5A+1 -Z O + 8 RTN5A+1 SW1	- PUNCH FROM BIT SWITCHES REAC THE BIT SWITCHES	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03190 30B03200 30B03210 30B03210 30B03220 30B03230 30B03240 30B03250 30B03250 30B03250
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0 06CD 0 06CE 0 06CF 0 06D0 0 06D1 01	0C000746 C4000754 1300 D400081F COF7 4830 6300 4808 6308 6BF2 C40005E0 FOAF	*  *  *  RTN5A RTN5B	LDX XIO LD SLO LD BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC LDX BSC BSC LDX BSC BSC BSC BSC BSC BSC BSC BSC BSC BSC	L3 L 3 L 3 3 L	ROUTINE 5  /0000 RDBS BITSW 0 XCHAR RTN5A+1 -2 0 + 8 RTN5A+1 SW1 SWCMP	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03180 30B03190 30B03200 30B03210 30B03210 30B03220 30B03230 30B03240 30B03250 30B03250 30B03250 30B03270 30B03280
06C4 01 06C6 01 06C8 0 06C9 0 06CC 0 06CC 0 06CE 0 06CF 0 06D0 0 06D1 01 06D3 0	0C000746 C4000754 1300 D400081F C0F7 4830 6300 4808 6308 6BF2 C40005E0 FOAF	*  *  *  RTN5A RTN5B	LDX XIO LD SLA SLO LDX BSC LDX BSC LDX BSC LDX BSC BSC	L3 L 3 L 3 3 L	ROUTINE 5  /0000 RDBS B1TSW 0 XCHAR RTN5A+1 -2 0 + 8 RTN5A+1 SW1 SWCMP LOOP+2	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR 1F END THIS RTN	30B03100 30B03110 30BC3120 30B03130 30B03140 30B03150 30B03160 30B03170 30B03180 30B03190 30B03210 30B03210 30B03220 30B03230 30B03250 30B03250 30B03250 30B03250 30B03260 30B03280 30B03280 30B03280
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0 06CC 0 06CF 0 06CF 0 06D1 01 06D3 0 06D4 01 06D6 0	0C000746 C4000754 1300 D400081F C0F7 4830 6300 4808 6308 6BF2 C40005E0 F0AF 4C200647	*  *  *  RTN5A RTN5B	LDX XIO LDA STO LDC LDX LDX LDX STX LD EBSC BSI	L3 L 3 L 3 3 L	ROUTINE 5  /0000 RDBS BITSW 0 XCHAR RTN5A+1 -2 0 + 8 RTN5A+1 SWCMP LOOP+Z XKRDY	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR 1F END THIS RTN CHECK PUNCH READY	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03180 30B03190 30B03210 30B03210 30B03220 30B03230 30B03230 30B03250 30B03250 30B03250 30B03270 30B03280 30B03280 30B03290 30B03290 30B03300
06C4 01 06C6 01 06C8 0 06C9 0 06CC 0 06CC 0 06CE 0 06CF 0 06D0 0 06D1 01 06D3 0	0C000746 C4000754 1300 D400081F C0F7 4830 6300 4808 6308 6BF2 C40005E0 FOAF	*  *  RTN5A RTN5B	LDXID LDXID LDXID LDXID LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LDXIX LD	L3 L 3 L 3 3 L	ROUTINE 5  /0000 RDBS B1TSW 0 XCHAR RTN5A+1 -Z 0 + 8 RTN5A+1 SW1 SWCMP LOOP+Z KKRDY PUNH	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR 1F END THIS RTN	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03190 30B03200 30B03210 30B03220 30B03220 30B03250 30B03250 30B03250 30B03250 30B03270 30B03270 30B03290 30B03300 30B03310
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0 06CC 0 06CF 0 06CF 0 06D1 01 06D3 0 06D4 01 06D6 0	0C000746 C4000754 1300 D400081F C0F7 4830 6300 4808 6308 6BF2 C40005E0 F0AF 4C200647	* * * * RTN5A RTN5B	LDX LD SLD SLD LDS LDS LDS LDS LDS LDS LDS	L3 L 3 3 L L	ROUTINE 5  /OOOO RDBS BITSW O XCHAR RTNSA+1 -Z O + 8 RTNSA+1 SW1 SWCMP LOOP+Z XKRDY PUNH RTNSA	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR IF END THIS RTN CHECK PUNCH READY PUNCH THE CHARACTER	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03190 30B03210 30B03210 30B03220 30B03230 30B03250 30B03250 30B03250 30B03250 30B03250 30B03260 30B03270 30B03280 30B03290 30B03310 30B03310
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0 06CC 0 06CF 0 06CF 0 06D1 01 06D3 0 06D4 01 06D6 0	0C000746 C4000754 1300 D400081F C0F7 4830 6300 4808 6308 6BF2 C40005E0 F0AF 4C200647	* * * * RTN5A RTN5B	LDX LD SLD SLD LDS LDS LDS LDS LDS LDS LDS	L3 L 3 3 L L	ROUTINE 5  /OOOO RDBS BITSW O XCHAR RTNSA+1 -Z O + 8 RTNSA+1 SW1 SWCMP LOOP+Z XKRDY PUNH RTNSA	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR 1F END THIS RTN CHECK PUNCH READY	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03180 30B03200 30B03210 30B03220 30B03220 30B03220 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03280 30B03280 30B03310 30B03310 30B03310
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0 06CC 0 06CF 0 06CF 0 06D1 01 06D3 0 06D4 01 06D6 0	0C000746 C4000754 1300 D400081F C0F7 4830 6300 4808 6308 6BF2 C40005E0 F0AF 4C200647	* * * * * RTN5A RTN5B	LDX LD SLD SLD LDS LDS LDS LDS LDS LDS LDS	L3 L 3 3 L L	ROUTINE 5  /OOOO RDBS BITSW O XCHAR RTNSA+1 -Z O + 8 RTNSA+1 SW1 SWCMP LOOP+Z XKRDY PUNH RTNSA	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR IF END THIS RTN CHECK PUNCH READY PUNCH THE CHARACTER	30B03100 30B03110 30BC3120 30B03130 30B03140 30B03150 30B03160 30B03170 30B03180 30B03190 30B03210 30B03210 30B03220 30B03220 30B03250 30B03250 30B03250 30B03270 30B03280 30B03290 30B03310 30B03310 30B03310 30B03310 30B03320 30B03330
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0 06CC 0 06CF 0 06CF 0 06D1 01 06D3 0 06D4 01 06D6 0	0C000746 C4000754 1300 D400081F C0F7 4830 6300 4808 6308 6BF2 C40005E0 F0AF 4C200647	* * * * * * * * * * * * * * * * * * *	LDX LD SLD SLD LDS LDS LDS LDS LDS LDS LDS	L3 L 3 3 L L	ROUTINE 5  /OOOO RDBS BITSW O XCHAR RTNSA+1 -Z O + 8 RTNSA+1 SW1 SWCMP LOOP+Z XKRDY PUNH RTNSA	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR IF END THIS RTN CHECK PUNCH READY PUNCH THE CHARACTER	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03160 30B03180 30B03190 30B03210 30B03210 30B03220 30B03220 30B03230 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0 06CC 0 06CF 0 06CF 0 06D1 01 06D3 0 06D4 01 06D6 0	0C000746 C4000754 1300 D400081F C0F7 4830 6300 4808 6308 6BF2 C40005E0 F0AF 4C200647	* * * * * * * * * * * * * * * * * * *	LDX LD SLD SLD LDS LDS LDS LDS LDS LDS LDS	L3 L 3 3 L L	ROUTINE 5  /0000 RDBS B1TSW 0 XCHAR RTN5A+1 -Z 0 + 8 RTN5A+1 SW1 SWCMP LOOP+Z XKRDY PUNH RTN5A	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR IF END THIS RTN CHECK PUNCH READY PUNCH THE CHARACTER	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03190 30B03200 30B03210 30B03220 30B03220 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03350 30B03310 30B03310 30B03330 30B03350 30B03350 30B03350
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0 06CC 0 06CF 0 06CF 0 06D1 01 06D3 0 06D4 01 06D6 0	0C000746 C4000754 1300 D400081F C0F7 4830 6300 4808 6308 6BF2 C40005E0 F0AF 4C200647	* * * * * * * * * * * * * * * * * * *	LDX LD SLD SLD LDS LDS LDS LDS LDS LDS LDS	L3 L 3 3 L L	ROUTINE 5  /0000 RDBS B1TSW 0 XCHAR RTN5A+1 -Z 0 + 8 RTN5A+1 SW1 SWCMP LOOP+Z XKRDY PUNH RTN5A	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR IF END THIS RTN CHECK PUNCH READY PUNCH THE CHARACTER	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03190 30B03210 30B03210 30B03220 30B03230 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03300 30B03310 30B03310 30B03330 30B03330 30B03350 30B03350 30B03350 30B03350 30B03350
06C4 01 06C6 01 06C8 0 06CB 0 06CC 0 06CD 0 06CE 0 06CF 0 06D1 01 06D3 0 06D4 01 06D6 0	0C000746 C4000754 1300 D400081F CØF7 4830 6300 4808 6308 6BF2 C40005E0 FOAF 4C200647 4009 7057	* * * * * * * * * * * * * * * * * * *	LDX LD SLD SLD LDS LDS LDS LDS LDS LDS LDS	L3 L 3 3 L L	ROUTINE 5  /0000 RDBS BITSW O XCHAR RTN5A+1 -Z O + 8 RTN5A+1 SW1 SWCMP LOOP+Z XKRDY PUNH RTN5A	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR IF END THIS RTN CHECK PUNCH READY PUNCH THE CHARACTER  CHARACTERS SUBROUTINE	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03190 30B03200 30B03210 30B03220 30B03220 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03300 30B03310 30B03310 30B03310 30B03330 30B03340 30B03350 30B03350 30B03360 30B03370 30B03370 30B03370 30B03370
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0 06CE 0 06CF 0 06D1 01 06D3 0 06D4 01 06D6 0 06D7 0	0C000746 C4000754 1300 D400081F COF7 4830 6300 4808 6308 6BF2 C40005E0 FOAF 4C200647 4009 7057	* * * * * * * * * * * * * * * * * * *	LDX LD SID SSTO LDS LDS LDS LDS LDS LDS LDS LDS LDS LDS	L3 L 3 L L	ROUTINE 5  /0000 RDBS BITSW 0 XCHAR RTN5A+1 -2 0 + 8 RTN5A+1 SW1 SWCMP LOOP+2 XKRDY PUNH RTN5A ************************************	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR IF END THIS RTN CHECK PUNCH READY PUNCH THE CHARACTER  CHARACTERS SUBROUTINE IS RTN COMPLETE	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03180 30B03200 30B03210 30B03220 30B03220 30B03220 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03300 30B03310 30B03310 30B03310 30B03310 30B03310 30B03350 30B03350 30B03360 30B03360 30B03370 30B03370 30B03360 30B03370 30B03370 30B03370 30B03370
06C4 01 06C6 01 06C8 0 06C9 0 06CC 0 06CC 0 06CE 0 06CF 0 06D1 01 06D3 0 06D4 01 06D6 0 06D7 0	0C000746 C4000754 1300 D400081F C0F7 4830 6300 4808 6308 6BF2 C40005E0 F0AF 4C200647 4009 7057	* * * * * * * * * * * * * * * * * * *	LDXD LD ASTO LD CK LDX LDX LDX LDX LDX LDX LDX LDX LDX LDX	L3 L 3 3 L L	ROUTINE 5  /0000 RDBS B1TSW 0 XCHAR RTN5A+1 -2 0 + 8 RTN5A+1 SWCMP LOOP+2 XKRDY PUNH RTN5A ************************************	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR IF END THIS RTN CHECK PUNCH READY PUNCH THE CHARACTER  CHARACTERS SUBROUTINE	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03190 30B03200 30B03210 30B03220 30B03220 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03300 30B03310 30B03310 30B03310 30B03330 30B03340 30B03350 30B03350 30B03360 30B03370 30B03370 30B03370 30B03370
06C4 01 06C6 01 06C8 0 06C9 01 06CB 0 06CC 0 06CE 0 06CF 0 06D1 01 06D3 0 06D4 01 06D6 0 06D7 0	0C000746 C4000754 1300 D400081F COF7 4830 6300 4808 6308 6BF2 C40005E0 FOAF 4C200647 4009 7057	* * * * * * * * * * * * * * * * * * *	LDX LD SID SSTO LDS LDS LDS LDS LDS LDS LDS LDS LDS LDS	L3 L 3 L L	ROUTINE 5  /0000 RDBS BITSW 0 XCHAR RTN5A+1 -2 0 + 8 RTN5A+1 SW1 SWCMP LOOP+2 XKRDY PUNH RTN5A ************************************	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR IF END THIS RTN CHECK PUNCH READY PUNCH THE CHARACTER  CHARACTERS SUBROUTINE IS RTN COMPLETE	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03160 30B03180 30B03200 30B03210 30B03220 30B03220 30B03220 30B03270 30B03250 30B03250 30B03270 30B03280 30B03290 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03370 30B03350 30B03350 30B03360 30B03370 30B03360 30B03370 30B03380 30B03380 30B03380 30B03380 30B03380 30B03380 30B03390 30B03390 30B03390 30B03390
06C4 01 06C6 01 06C8 0 06C9 0 06CC 0 06CC 0 06CE 0 06CF 0 06D1 01 06D3 0 06D4 01 06D6 0 06D7 0	0C000746 C4000754 1300 D400081F C0F7 4830 6300 4808 6308 6BF2 C40005E0 F0AF 4C200647 4009 7057	* * * * * * * * * * * * * * * * * * *	LDXD LD ASTO LD CK LDX LDX LDX LDX LDX LDX LDX LDX LDX LDX	L3 L 3 L L	ROUTINE 5  /0000 RDBS B1TSW 0 XCHAR RTN5A+1 -2 0 + 8 RTN5A+1 SWCMP LOOP+2 XKRDY PUNH RTN5A ************************************	- PUNCH FROM BIT SWITCHES  REAC THE BIT SWITCHES  SAVE NEXT PCH CHAR  BR IF END THIS RTN CHECK PUNCH READY PUNCH THE CHARACTER  CHARACTERS SUBROUTINE IS RTN COMPLETE	30B03100 30B03110 30B03110 30B03130 30B03140 30B03150 30B03160 30B03170 30B03190 30B03210 30B03210 30B03220 30B03220 30B03250 30B03250 30B03250 30B03250 30B03250 30B03250 30B03270 30B03280 30B03300 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310 30B03310

06DC 01	4000649		BSC	L	CNTRL	BR - END OF RECORD	30B03430 30B03440
0405.01	4C90C6D8	RASH	asc	1	CRASH	RET IF RCD NCT CMPLT	30803450
OPDE OI	4030,0000	*	030	•	CILADII		30803460
			****	***	*****	******	30BU3470
•		*					3080348 <b>0</b>
		*					30B03490
		*			PUNCH	READY SUBROUTINE	30803500
		*					30803510
06E0 0	0000	XKR DY			/0000		30B03520
06E1 0	085E		XIC		XIOSD	SENSE AND SAVE DSW	30803530
06E2 0	D070		STO		DSWAS		30803540 30803550
0/53.0	50/5	*	AND		XMASK	REMOVE ROR NRDY BIT	30803560
06E3 0	E065	*	AND		AMASK	KENCYL NON MADI DIT	30803570
0654 01	4C9806EC	•	B SC	ī	XKRDY,+-	BR IF DSW DKAY	30803580
0064 01	40700000	*		•		:	30803590
06E6 0	1007		SLA		7	DSW ERROR	30803600
	4C1006ED		B SC	L	XKRD2 ,-	BR IF PUNCH READY	30803610
06E9 01	CC000888		LDD	L	PNRDY	SET PUNCH NOT READY	30803620
06EB 01	DC00081A		STD	L	EMESG+3		30803630
	*	*					30803640
06ED 0	6105	XKR D2		1	5	ERROR - 5	30B03650 30B03660
06EE 0	C864		LDD.		DSWAS		30803670
06EF 0	E05F		RTE		POFF 16		30B03680
06F0 0	16D0 44000809		BSI	L	PRDSW	PRINT THE ERROR	30B03690
0871 01	44000809	*	031	-	,		30803700
06F3 01	44000830	•	BSI	L	TIME	PAUSE BEFORE RECHECK	30803710
06F5 0	70EB		MDX	_	XKRDY+1		30803720
		****	****	***	******	*******	30B03 <b>7</b> 3 <b>0</b>
		*					30803740
		*					30803750
		*	100		READE	R READY SUBROUTINE	30803760
	0000	*			10000	•	30803770 30803780
06F6 0	0000	RRDY	DC		/00C0 X10SD	SENSE AND SAVE DSW	30803780
06F7 0 06F8 0	0848 D05A		STO		DSWAS	JENSE AND SAVE DSW	30803800
0010 0	00JA	*	3.0		03443		30803810
06F9 0	E04E		AND		RMASK	REMOVE PCH NRDY BIT	30803820
		*					30BU3830
06FA 01	4C9806F6		B SC	I	RRDY,+-	BR IF DSW DKAY	30803840
		*					30803850
06FC 0	1005		SLA		5	DSH ERRCR	30803860
	4C100703		BSC	Ļ	RRDY2	BR IF READER REACY SET NOT READY MSG	308038 <b>70</b> 30803880
	CC000886		LDD	L	RNRDY EMESG+3	SEI NOT KEAUT HSG	30803890
0701 01	DC00081A 6104	RRDY2		_	4	ERROR - 4	30803900
	C84E	KKO IZ	LDD	•	DSHAS		30803910
0705 0	E048		AND		ROFF	•	30803920
0706 0	18D0		RTE		16		30803930
0707 01	44000809		BSI	L	PRDSW	PRINT THE ERROR	30803940
		*					30803950
	44000830		BSI	L	TIME	PAUSE BEFORE RECHECK	30803960
070B 0	70EB		MDX		RRDY+1		30803970
			****	***	*****	******	30803980
		*			CONTR	CL READER SUBROUTINE	30803990 30804000
		*			CONTR	LE READER SOURGOTTAL	30B04010
070C 0	6101	FEED	LDX	1	1	SET READER INTRPT	30804020
	6D00062E		STX		INTEX	EXPECTED	30804030
		*					30B04U40
070F 0	0832		XIO		XICFD	FEED READER	30B04050
		*					30804060
0710 0	082F		XIC		XICSD	SAVE BUSY DSW	30804070
0711 0	D03F		STO		DSMBY	CHECK BUCK SCH	30804080
0712 01	44000788	•	BSI	L	BSYES	CHECK BUSY DSW	30804090 30804100
		-	*		100		3000-100

PAPER TAPE READER/PUNCH FUNCTION TEST

## PAPER TAPE READER/PUNCH FUNCTION TEST

DATE EC NC.

0714	01	44000830	*	BSI	L	TIME	PAUSE FOR INTRPT	30804110 30804120	
0716	O	6111		LDX	- 1	/0011	ERRCR - 11	30B04130	
0717		C839		LDD	_	DSWBY		30B04140	
0716		E035		AND		RUFF		30BU4150	
0719		E831		OR		DSWR2		30B04160	
071A		705F		MDX		DINES	GO PRINT THE ERROR	30804170	
•••	•		****		***		*****	30804180	
			*					30BU4190	
			*	V	1.50	PUNCH	AND CONTROL READER	30904200	
			*				SUBROUTINE	30B04210	
			*					30804220	
0718	O1	650005FD	XFEED	LDX	LI	DINTI	RESTORE DOUBLE INT	30B04230	
		600005FC		STX		DINT1-1	SWITCH	30804240	
0	-	900000.0	*	, -		4.83		30804250	
071F	0	6103		LDX	1	3	SET DOUBLE INTRPT	30B04260	
		6D00062E		XTZ		INTEX	EXPECTED	30B04270	
0.20	-	0000000	*					30804280	
0722	n	081B		XID		XIOXX	FEEC AND PUNCH	30B04290	
0723		081E		XIO		XIOFD		30B04300	
0.23	•		*					30B04310	
0724	G	081B		X)O		XIOSD	SAVE BUSY DSW	30B04320	
0725		DO2B		STO		DSWBY		30804330	
		44000786		881	L	BSYES	CHECK BUST DSW	30804340	
0.20	••	11000100	*		` -	4.7.437		30804350	
0728	O1	44000836		BSI	L	TIME	PAUSE FCR INTERRUPT	30804360	
0120	01	44000050	*	50.				30804370	
072A	n	C026		LD		DSMBY	LCST INTERPT	30804380	
0726		6113	6	LDX	1	/0013	ERROR - 13	30B04390	
072C		1800		RTE	_	16		30804400	
072D		COLF	14.8	LO		DSWRX		30B04410	
072E		704B		MDX		DINES	GO PRINT THE ERROR	30B04420	
0.22	•		****		**		*******	30B04430	
			*					30B04440	
		infanti kili Tanan	*			PUNCH	SUBROUTINE	30B04450	
			*		,			30B0446 <b>0</b>	
072F	C	6102	PUNH	LDX	1	2	SET PUNCH INTRPT	30B04470	
		6D00062E		STX	Ll	INTEX	EXPECTED	30B04480	
			* '					30B04490	
0732	0	0808		X10		XIOXX	PUNCH CHARACTER	30B04500	
			*					30B04510	
0733	0	080C		XIO		XICSD	SAVE BUSY DSW	30BU4520	
0734		DUIC		\$10		DSWBY		30B04530	
0735	01	44000788		BSI	L	BSYES	CHECK BUSY DSW	3080 <b>4540</b>	
			*				•	30B04550	
0737	01	4400083C		BSI	L	TIME	PAUSE FCR INTERRUPT	30804560	
pr			*					30804570	-
0739	0	C817		LCD		DSWBY	NO PUNCH INTERPT	30804580	
073A	0	6112		LCX	1	/0012	ERROR - 12	30B04590	
0738	C	E013		AND		POFF		30B04600	
073C	0	E80F		DR		DSWX2		30804610	
0730	0	703C		MDX		DINES		30804620	
			****	****	***	******	*******	30804630	
			.*					30804640	
		*	*				•	30B04650	
073E		0000		BSS	E			30B04660	
073E	1 /	:081F	XXOIX			XCHAR	PUNCH IOCC	30B04670	
073F	0	1900	ati	DC		/1900		30804680	
0740	C	0000	XIDSD			/0000	SENSE DSW IDCC	30504690	•
0741	0	1F01		DC ·		/1F01	THE PROPERTY OF THE PROPERTY O	30804700	
0742	C	0000	XIDFD			/0000	FEEC IOCC	30804710	
0743	0.	1010		DC		/1C10	रम्भ तमा सम्बद्धाः हुन । प्रकृष्टिक्ष म	30B04720	
0744	1	081E	XIORR		\$	CARED	READ IOCC	30804730	
0745	0	1400		DC		/1A00		30804740	
0746		0754	RDBS	DC		BITSW	READ BIT SWITCHES	30B04750	
0747	<b>C</b>	3A00	e de la compansión de la c La compansión de la compa	DC		/3A00	A COST OF AND ADMINISTRATION OF A STATE OF A	30B04760	
0748	0	FEFF	RMASK		351	<b>VEEFF</b>	READER MASK	30804770	
0749	0	FBFF	XMASK	DC	- 1	/FBFF =	PUNCH MASK	30804780	
									•
DATE			OLMAY			DV66		PROG ID	0308-2
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\$ 1.							
074A 0	FFFF		DC		/FFFF	MINUS CNE	30804790
074B 0	0000	DSWR2			/0C00	RDR BUSY EXP DSW	30804800
074C 0	0300	DSWX2	DC .		/0300	PCH BUSY EXP DSW	30804810
074C 0	0F00	DSWRX	DC		/0F0U	DOUBLE BUSY DSW EXP	30804820
074E 0	0100	ROFF	DC		/0100		30804830
074F 0	0400	POFF	DC		/0400		30804840
0750 0	0000	50. 50	DC		/6000	LACT DUCK DC	30804850
0751 0	0000	DSWBY			/0000	LAST BUSY DSW	30804860 30804870
0752 0	0000	061146	DC		/0000	NOT USED LAST DSWER PRINTED	30804870
0753 0	0000	DSWAS BITSW			/0000	LAST DSHER PRINTED	30B04890
0754 0	0000			***	*****	******	30804900
		*					30804910
		*					30804920
0755 0	6101	SPUR	LDX	1	1		30804930
	6D000819		STX	LI	EMESG+2	to the electric control of the contr	30B04940
0758 0	6120		LDX	- 1	/20	ERRCR - 20	30804950
0759 01	C4000623		LD	L	DSWIT		30804960
075B 01	44000809		<b>B S I</b>	·F	PRDSW	PRINT DSW ERROR	30804970
		*	157		* * *	SPURRIOUS OR NON-	30804980
		*			242.5	RESETABLE INTERRUPT	30604990
075D 00	44800161	***	BSI	I	START	*****	30B05000 30B05010
		****	****	***	*****	* <del>* * * * * * * * * * * * * * * * * * </del>	30805020
		*			DOINT	DSW ERRORS DETECTED	30805030
		*			FNINT	DURING INTERRUPT	30805040
er egytter		*	8				30805050
075E 00	65000000	NIPES	LDX	Ll	/0000	PRINT DSW ERROR	30805060
<b>3.</b> 5. 33		*				DETECTED WHILE	30805070
		*				RUNNING RTN 1 DR	30805080
		*			金属的 1983	RTN 2	30805090
0761 01	CC000623		LDD	L	DSWIT		30805100
0763 01	E5000740		AND	*.	ROFF-1		30B05110
· · · · · · · · · · · · · · · · · · ·	ED00062B		OR		INTEX-3		30805120
-	7105		MDX	1	5	ERRCR - 6 OR 7	30805130
C768 0	7011	_	MDX		DINE5		30805140 30805150
		·*				And the second of the second	30805160
0740 01	C4000623	DINEL	1.0	L	DSWIT	PRINT DSW ERROR	30805170
0709 01	C4000023	±	LU	•	DOMIT	DETECTED WHILE	30805180
ar turn to		*				RUNNING RTN 3 OR	30805190
					Section 1	RTN 4	<b>3</b> 0805200
076B 0	1800		RTE		16		30805210
076C 0	6108		LDX	1	8	ERROR - 8	30B05220
076D 0	700A		MDX		DI NE4		<b>3</b> 08052 <b>30</b>
		*					30805240
	C4000623	DINE2		L	DSWIT	SEQ SVC REC ERROR	30805250
0770 0	1800		RTE		16		30805260 308052 <b>70</b>
	C4000624		FD	L		BR IF 1ST SVC REG OK	30B05270
	40200777		BSC LDX	L,	DINE3.Z	ERROR - 9	30B05290
0775 0 0776 C	6109 7001		MDX	•	DINE4	LKNOK - 3	30805300
0116 C	7001	*	HUX		DINLY		30805310
0777 0	6110	DINES	LDX	1	/0010	ERROR - 10	30605320
	C4000628	DINE4			INTED		30805330
077A 0		DINE5			16		30805340
077B 01	44000809		BSI	L	PRDSW	PRINT THE ERROR	<b>3</b> 0805350
marine car		*				- 1994년 - 1일 - 1일	<b>30</b> 805360
077D 0		DINE6				INTRPT RECEIVED	30805370
	D40005E7	and the second	STO		MLSCF+2	BLOCK TIMER RETURN	30805380
		talia ja		11	RID	RET TO MAINLINE RTN	30805390
0782 0			LD	,,	ERRET	BR IF NC ERROR LAST	30B05400 30B05410
0/83 01	4D98C87E	*	BSC	11	3UK1371177	DN AF NE ERRUR LAST	30805420
0785 0	1810	-	SRA		16	RETURN TO FINISH	30805430
0786 0		1. 环形电流表示:1			ERRET	ALIGNING TAPE	30805440
0787 0	7014		MDX		READ	IN READER	30805450
	745.5-6:00 A	*****		***		**************	30B05460
	Tantification and pro-			+ ;	33.50 . 50+		

02JAN66 415490

PROG ID 030B-2 PAGE 4A

IBM	MAINTEN	IANCE DIAG	NOSTIC	PROGRAM	FOR TH	HE 1130	SYSTEM		PART NO.	2191232		- -		IBM	MAINTENAN	CE DIAGNOS	STIC PROC	GRAM FO	R THE 1	130 SYST	EM	PART NO. 21	91232 5A	
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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PAPER TAPE READER/PUNCH FUNCTION TEST

PART NO. 2191232 PAGE 5

PAPER TAPE READER/PUNCH FUNCTION TEST

PART NO. 2191232 PAGE 5A

	•		
		30805470	
	* CHECK BUSY DSw	30B05480	
	*	30805490	
0788 0 0000	BSYES DC 70000	30805500	
0789 01 60000760	STX L1 NIPES+1 FETCH LAST DSW SENSED	3080 <b>5510</b>	
078B 0 COC5	LO DSWBY AFTER I/O COMMAND	30805520	
078C 01 E5000747	AND LI RMASK-I	30805530	
078E 01 F500074A	ENR L1 DSWR2-1	30805540	
0790 01 40980788	BSC I BSYES,+- BR IF DSW CK	30805550 30805560	
0792 0 C88E	* LDD DSWBY PRINT DSW ERROR	30805570	
0793 01 E500C74D	AND LI ROFF-1	30805580	
0795 01 ED00074A	UR LI DSWR2-1 ERRCR - 1 CR 2 DR 3	30805590	
0797 0 18D0	RIE 16	30805600	
U798 0 4070	BSI PRDSW PRINT THE ERROR	30805610	
	¥	30805620	
		30805630	
0799 01 40800788	XBSYX BSC I BSYES EXIT TO USER	30805640	
		30805650	
	*	30B05660	
	**************************************	30805670 30805680	
	• • • • • • • • • • • • • • • • • • •	30805690	
•	* READ AND COMPARE SUBROUTINE	30B05700	
	*	30805710	
	* THIS ROUTINE READS THE READER BUFFER TWICE	30805720	
	* TO ENSURE THE SAME DATA IS READ. THEN IT	30805730	
•	* COMPARES THE DATA READ WITH WHAT SHOULD HAVE	30B0 <b>5740</b>	
	* BEEN READ. IF AN ERROR IS FOUND THIS ROUTINE	30805750	
	* WILL REALIGN THE TAPE IN THE READER BEFORE	30805760	
	* RETURNING TO MAINLINE ROUTINE IF THAT OPTION	30805770	
	* WAS SPECIFIED. CTHERWISE ONE ERROR IS PRINTED	30805780 30805790	
	* FUR EACH NON-COMPARE.	30805790	
	* AN ERROR WILL ALSO BE PRINTED IF THE ROUTINE	30805810	
	* CANNOT REALIGN THE TAPE IN 100 CHARACTERS.	30805820	
	*	30805830	•
	*	30805840	
0798 0 0000	RDIT DC /0000	30805850	
079C 01 C400081E	READ LC L CARED SAVE LAST CHAR READ	30805860	
079E G1 D4000821	STO L LREAD	30805870	•
Q7AO O U8A3	XIO XIORR READ CHARACTER	30B05880	
	# · CANE CHARACTER READ	30805890	
07A1 01 C400081E	LD L CARED SAVE CHARACTER READ	30805900 30805910	
07A3 0 D045	STO SAVIT	30805920	
07A4 0 089F	XIO XIORR READ	30805930	
07A5 0 C043	LD SAVIT CHECK IF SAME CHAR	30B05940	
07A6 0 F077	EGR CARED	30805950	
07A7 01 4C20U7C5	BSC L RDIT1, Z BR IF ERR IN REAC	30805960	
		30805970	
	#	30805980	
07A9 01 C400081F	RDITO LD L XCHAR DO CHARACTERS	30805990	
07AB 0 F072	EOR CARED COMPARE	30806000 30806010	
07AC 0 1808	SRA 8 BSC L RDIT2.Z BR IF NCN COMPARE	30806020	
07AD 01 4C2007CC		30B06020	
07AF 01 740107E7 07B1 0 7055	MDX L CORCT,1 MDX RDITE EXIT	30806040	
0104 0 7033	<b>*</b>	30906050	
07B2 0 6835	STX 0 NIST	3 18 0 6 0 6 0	
0783 00 6500A001	LDX L1 /AOO1 PRINT TAPE ALIGNED	30806070	
0785 01 CC00088A	LDD L TEAL	30806080	
0787 0 406A	BSI PTLOG PRINT THE MESSAGE	30806090	
07B8 01 C40005E1	LD L SW2 TURN OFF REALIGN SW	30806100	
078A 0 1009	SLA 9	30806110	
07BB 0 1809	SRA 9	30806120 30806130	
07BC 01 D40U05E1	STO L SW2 RDITD SRA 16 RESET BITLINE CHECK	30B06140	
07BE 0 1810	RDITD SRA 16 RESET BITLINE CHECK	20000140	
DATE 02JAN66	01MAY66 15NOV66	PROG ID	0308-2
EC NC. 415490	415490B 419643	PAGE	5

						•		
07BF	0	DO2B		STO		BTLNE .		30806150
0700		CO2C		LD		KFF00	_	30806160
07C1	0	D028		STO		NOLNE		30806170
07C2	0	6164		LDX	1	100	~ <del>=</del>	30806180
07C3		6928		STX	1	TRIAL		30806190
07C4		7042		MDX		RDITE .	EXIT	30B06200
			*					30806210
07C 5	0	C023	RDIT1	LD		SAVIT	CONSECUTIVE READ ERROR	30B06220
0706		1800		RTE		16		30806230
07C7		C056		LD		CARED		30806240
07C8		6118		LDX	1	/18	ERROR - 18	3080625 <b>0</b>
		44000809		BSI	L	PRDSW	PRINT THE ERROR	3080626 <b>0</b>
07CB		700D		MDX		RDITO	-	30806270
			*					30806280
07CC	0	CO1B	RDIT2	LD		N1 ST	1	308062 <b>90</b>
		4C2007EE		BSC	L	RDIT4,Z	BR IF TAPE ALIGNED	30B06300
			*					30B06310
07CF	0	CO1B		LD		BTLNE	BIT LINE OPEN CK	30806320
07D0		£84D		DR		CARED		<b>30806330</b>
0701		D019		STO		BTLNE		30806340
	•		*					<b>3</b> 08063 <b>50</b>
07D2	Ω	C017		LD		NOLNE	BIT LINE SHORT CK	30B06360
07D3		E04A		AND		CARED		30B06370
0704		D015		STO		NOLNE		30806380
0104	U	0010	*	3.0			The second secon	30B06390
0705	Δ1	74FF07EC	•	MDX	L	TRIAL,-1	COUNT DOWN 100 MAX	30806400
0707		7007		MDX	-	RDIT3		30B06410
וטוטו	U	1001		HUX		KD113		30806420
0700		CO11	•	LD		NOLNE	NO ALIGNMENT ERROR	30B06430
07D8		C011		LDX	1	/0019	ERROR - 19	30B06440
07D9		6119		RTE	•	16	ERROR 27	30B06459
07DA		1800				BTLNE		30B06460
07DB		CUOF		LD BSI		PRDSW	PRINT THE ERROR	30B06470
O7DC	ΟI	44000809	_	031	L	PRUSH	FRIM THE ERROR	30806480
0705	•	7005	•	MDX		RDITD		30B06490
07DE	U	70DF	•	MUX		KUITU		30806500
0705		4150	RDIT3	104		-8		30806510
07DF		61F8 6906	בי נטא	STX		CORCT		30B06520
07E0				BSI	r,	RRDY	READER READY	30B06530
		440006F6		STX		ERRET	READER READ!	30806540
07E3		6802		BSC	L	FEED	CONTROL READER	30B06550
0764	01	4C00070C	*	DJC	_	TELD	CONTROL READER	30806560
0754	^	0000	ERRET	DC		/0000	RET TO CMPRE IF SET	30806570
07E6		0000	CORCT			/0000	TAPE ALIGNMENT	30B06580
07E7 07E8		0000	NIST	DC		/0000	WORK AREAS	30806590
		0000	SAVIT			/0000	SAVED CHARACTER	30B06600
07E9		0000	NOL NE			/FF00	SOLID LINE CHECK	30806610
O7EA		FF00				/0000	OPEN LINE CHECK	30806620
07EB		0000	BTLNE			100	100 TRIALS MAXIMUM	30806630
07EC	-	0064	TRIAL			/FF00	100 INTALS MANIMON	30806640
07ED	U	FF00	KFF 00	DC		77700		30B06650
0755		C / 00 0 E C 1	* RDIT4			SW2		30806660
		C40005E1	KD114		L			30B06670
07F0		1008		SLA		8 RDIT6,-	BR IF NC REALIGN	30806680
		4C1007F6		BSC	L		DK IF NO REALISM	30806690
07F3		1008		SLA		8 NJ CT	•	30806700
07F4		DOF3		STO		N1 ST		30806710
07F5	U	70E9	_	MDX		RDIT3		30B06720
	_		# DD17/			40014	DATA DEAD EDDOD	
07F6		6114	RDIT6			/0014	DATA READ ERROR Set Alpha Message	30806730
		CC000884		LDD	L		SEI ALPHA FESSAUE	30806740 30806750
07F9		D820		STD		EMESG+3		30806750
07FA		C025		LD		LCHAR		30806760
O7FB		F023		EOR		XCHAR		30806770
		40180802		BSC	L	RD115,+-	BR IF BUF S/NB CNGD	30806780
07F.E		COIF		LD		CARED		30806790
07FF		F021		EOR		LREAD	DO TE ODD DIE CHOCO	30806800
0800		4818		BSC		+- 40015	BR IF RDR BUF CNGED	30806810
0801	Ü	6115		LDX	1	/0015		30806820
		Market Company					•	

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# PAPER TAPE READER/PUNCH FUNCTION TEST

802 0 COIC	RDIT5 LD	XCHAR	BUILD ERROR MESSAGE	3080683
803 0 1898	SRT	24		3080684
804 0 1088	SLT	8	ERROR - 14 OR 15	3080689
805 0 C018	LD	CARED	21 01 19	3050686
806 0 4002	ESI	PRDSh	PRINT THE ERROR	3080687
000 0 4002	*	FRUSH	FRINI THE ERROR	3080686
007 01 40060700	RDITE ESC	I RDIT		3080689
807 01 4C80C798			*****	3080690
	******		* * * * * * * * * * * * * * * * * * * *	
				308069
	*			30B0692
	<b>₹</b>	PKIN	T ERROR SUBROUTINE	308069
	*			3080694
809 0 0000	PRDSm CC	/0000	PRINT ERROR RTN	308069
	*			30B0696
80A 0 D811	STD	EMESG+5	SAVE DATA WAS + S/B	30B069
	*			30B069
80B 0 690B	STX	1 EMESG	SAVE MESSAGE ID NO	3080699
	******	*********	******	30B070
BOC 00 44800162	ESI	I ERROR	<b>★</b>	308070
BUE 1 0817	CC	EMESG	MESSAGE ADDR *	308070
80F 0 0000	DC	2.1230	LOCP ON ERR ADDR +	308070
0000		. * * * * * * * * * * * * * * * * * *	*******	308070
910 0 6303	LDX	2 3	· · · · · · · · · · · · · · · · · · ·	308070
810 0 6203				
811 0 6A07	STX	2 EMESG+2	CLEAD ALDUA MECC	308070
812 0 10A0	SLT	32	CLEAR ALPHA MESS	308070
813 0 D806	STD	EMESG+3	NORWAL	308070
314 01 64800809	LDX	IO PRDSW	NORMAL + LCOP RETS	308070
	*	•,		308071
816 0000	BSS	E		30B071
816 0 1000	TIMEX DC	/1000	COUNTER	30B0 <b>7</b> 1
817 0 0000	EMESG DC	/0000	MESSAGE ID	30B071
818 0 0000	DC	/0000	HEX OUTPUT	308071
819 0 0003	DC	/0003	WORD COUNT	308071
81A 0 0000	DC	/0000	ALPHA ADRS	30B071
818 0 0000	DC	/0000	ALPHA ADRS	308071
81C 0 0000	DC	/0000	DSWAS	308071
81D 0 0000	DC	/0000	DSW S/B	308071
810 0 0000		7 0000	U3# 37 U	308072
				30B072
015 0 0000	CARED DC	/0000	CHARACTER READ	30B072
B1E 0 0000				30B072
B1F 0 0000	XCHAR DC	/0000	PUNCH DUTPUT CHAR	
820 0 0000	LCHAR DC	/0000	PREVIOUS CUTPUT CHAR	3080724
821 O 000u	LREAD DC	/0000	PREVIOUS CHAR READ	30B072
		********	********	30B072
	*			308072
	•	and the second of the second	10 20 25 36 2 15 12 15 14 <u>2</u> 2 3 <u>4</u> 1	30B072
	*	LOG	MESSAGE SUBROUTINE	308072
	*			308073
322 0 0000	PTLOG DC	/0000		30B073
323 0 6907	STX	1 LGMS	SAVE MESSAGE ID	30B073
	*			30B073
24 0 D809	STD	LGMS+3	SAVE MODIFIERS	308073
		,	******	308073
25 00 44800163	881	I LDG	a waxay a sanga Kababasa 🛊	30B073
27 1 082B	DC	LGMS	ADDR OF MESSAGE *	308073
the office of the second of th			*******	308073
20 01 44800022	LOX	IO PTLOG	NORMAL RETURN	308073
28 01 64800822				30B074
60 60 ACDY60389	* * * * * * * * * * * * * * * * * * *	TE WAS TO SEE	88 th 32% FF	308074
0001	BSS	7 <b>€</b> ( <b>1</b> 1441 - )	MCC . ID	그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그
2B 0 0001	LGMS DC	1	MSG ID	308074
32C 0 000U	DÇ	/0000	HEX OUTPUT OWNER	308074
2D 0 0000	DC.	/0000	DATA ICAN CAM PRAZES	30B0744
2E 0 0000	DC	/0000	•	30B0749
2F 0 0000	, <b>DC</b>	70000		308074
	*******	********	*****************	308074
	*	4, 18, 4, 19		3080748
	*	TIME	D DELAY SUBROUTINE	30B0749
	*			30B0 <b>75</b> 0
			•	
SES LYNE SIYOSKI	. Parket of the first section of the	878 - 872 (N. )		
TE 02JAN66	01MAY66	15NDV66		PROG
NO. 415490	415490B	419643		PAGE
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4 34 42 3	5,875.5	2379	65

C830	^	0000	TIME	DC		/0000		30807510	
		65001000		LDX	L1	/1000	SET UP COUNTER	30807520	
0833		69E2		STX		TIMEX		30B07530	
		74FF0816		MDX	L	TIMEX,-1	DECREMENT COUNTER	30B07540	
0836	0	7002		MDX		TIMEI		30B07550	
0837	01	4C80C830		BSC	I	TIME	EXIT TIME UP	30B07560	
			*					30B07570	
		65000634	TIMEL			TIME+4	SET FOR REENTRY	30807580	
		6D0005E7	PDSwX			MLSCF+2		30807590 30807600	
083D	00	44800161		BSI	I	START	******	30807610	
			*	***	***	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		30B07620	
			*			BULLD	NEXT CHARACTER	30807630	
			*				BROUTINE	30807640	
			*					30B07650	
083F	0	0000	MARK	DC		/0000		30807660	
0840	0	CODE		LD		XCHAR	SAVE LAST CHARACTER	30807670	
0841	0	1808		SRA		8		30807680	
0842	-	1008		SLA		8		30807690	
0843	0	DODC	_	STO		LCHAR		30807700 30807710	
0044	00	65000001	* ,	LDX	Ll	1	INIT TEST XR1	30807720	
0846		66000000	DULP	LDX	LZ	-	XR2	30807730	
0848		→E800870	0021	BSC		WHAT	GD BUILD CHARACTER	30807740	
••••	-	12000010	*		-			30B07750	
084A	01	C5000874	NRIPX	LD	1.1	BITSX	START NEW RIPPLE	30B07760	
084C	0	DOD2		STO		XCHAR	PATTERN	30B07770	
084D		6201		LDX	2			30807780	
084 E	0	701D		MDX		EXITX		30807790	
0015		COCE	COINV	. 0		XCHAR	SHIFT RIPPLE PATTERN	30807800 30807810	
084F 0850		COCF 1001	SRIPX	SLA		1	SHIFT KIPPLE PATTERN	30807820	
0851		DOCD		STO		XCHAR		30B07830	-
0852		4820		BSC		Z	SKIP NEXT CH NO BITS	30807840	
0853		7018		MDX		EXITX		30B07850	
0854	0	6202		LDX	2		•	30807860	
0855	0 :	COLE		LD		BITSX	PLACE ALL BIT CHAR	30807870	
0856	-	DOC8	•	STO	_	XCHAR	and the state of t	30807880	
085 <b>7</b>	0	6925		STX	. 1	COUNX		30807890 30807900	
005.0	01	74FF087D	BARX	MDX	L	COUNX1	SKIP WHEN COUNX GO O	30B07910	
085A		7011	DANA	MDX	•	EXITX	SKIP WHEN COOKE OS C	30807920	
0858		6200		LDX	2	0		- 30B07930	
085C		7101		MDX	1	1		30B07940	
085D	0	6920		STX	1	KOUNX	State of the state	30807950	
		74F8087E		MDX	L	KOUNX ,-8	SKIP EXCEPT END RIPPE	30807960	
0860	-	7001		MDX		ENRIX	BR TO END RIPPLE ROUT	30B07970	
0861	0	700A		MDX		EXITX	BR TO EXIT	30807980 30807990	
0862	^	6203	ENRIX	IDX	2	3 .	END RIPPLE PATTERN	30B08000	
0863		7008	LINITA	MDX	_	EXITX		30808010	
0003	•	7000	*					30B08020	
0864	0	C018	ALLBX	LD		COUNX	ALL CHARS PATTERN	30B08030	
0865		D0B9		STO		XCHAR		30808040	
0866	0	800E		A	1	ONEEX	ADC ONE 1. E. 0100	30808050	
0867				STO		COUNX	Rayda - Ia	30808060	
		4C20086C		BSC	L	EXITX .Z		30808070	
277.5 Q		Suff		118	3	7.2		30808080	
086A		/ 101	/考もも3 : 1 -	LDX	1		CONTROL AND AND ARROWS TO RESIDENCE	30808090 30808100	
.0868€		6200	ð .	LDX		^		30808110	
086C			EXITX	F 201 F 1		DULP-1	新四套。	30808120	
086D				STX		DULP+1		30808130	
086E	01	4C80083F		BSC	1	MARK	EXIT	30808140	
artő (		1034		0		(6.505		30B08150	
0355 0		10.22		****	***	***	******	30808160	
0070	,	0.04.4	*	nc .		NDTDY	DECEDD CONTROL APPS	30808170	
0870	ī	084A	WHAT	DC		NRIPX	RECERD CONTROL ACRS	30808180	

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	With the Di	,			PAGE	7
PAPER T	APE READER	PUNCH FUNC	TION TEST			
			•			
0871 1	084F	DC			30808 <b>190</b> 30808 <b>200</b>	
0872 1 0873 1	0858 0864	DC			30B08200	
0373 1	0004	*	, ALLUN		3080822 <b>0</b>	
		*			30B08230	
0874 0	FF00	BITSX DO		CHARACTER PATTERN	30808240	
0875 0	0100	DNEEX DO		CONSTANTS	30808250	
0876 0 0877 0	00E0	DC DC			30B08260 30B082 <b>7</b> 0	•
0878 0	00F0	DC			30808280	
0879 0	00F8	DC		•	. 30B08290	
C87A 0	UOFC	DO	/00FC		30808300	
087B 0	UOFE	. DO			30808310	
087C 0	OOFF	DO	/00FF	·	30808320	•
087C 0	0000	COUNX DO	/0000	WORK AREAS	30808330 30808340	
087E 0	0000	KOUNX DO			30808350	
0012 0	0000			*******	30808360	
		*	•		30B08370	
		*			30B08380	
		*		ADDRESSES FOR RETURN TO	30808390	
		· *		MAINLINE AFTER INTRPT	30808400 30808410	
087F 1	068F	SORTS DO	RTN1A	ROUTINE 1	30808420	
0880 1	0695	DONIS			30B08430	
0881 1	069F	DC			30B0844 <b>0</b>	
0882 1	U6AF	DC			30B08450	
0883 1	0602	DC		ROUTINE 5	30808460	
		*******	*******	*********	30B08470 30B08480	
				ALPHABETIC MESSAGE	30B08490	
		*		STORAGE AREAS	30808500	
		*	•		30808510	
0884	0000	8		·	30808520	
0884 1	0899	WASSB DO			30868530 30808540	
0885 1 0886 1	089C 088C	RNR DY DO			30B08550	
0887 1	08A5	DO			30808560	
0888 1	088F	PNRDY DO			30B08570	
C889 1	08A5	DC			30B08580	
C38A 0	0000	TEAL DO			30B0 <b>8590</b>	
C88B 1	0892	DC	: ATAPE		30808600 30808610	
088C 0	6232	ARDR DO	/6232	RDR ERROR	30808620	
	6200	DC	•		30808630	
088E 0	FFFF	DC			30B08640	
		*			30808650	
088F 0	561E	APCH DO			30808660 30808670	
0890 0 0891 0	2600 FFFF	D(			3080868 <b>0</b>	
0871 0	rrer	*	, ,,,,,		30B08690	
0892 0	9C3C	ATAPE DO	/9030	TAPE ALIGNED	30808700	
0893 0	5434	DC	/5434	•	30808710	
C894 0	213C	00			30B08720	
0895 0	5C20	D(			30808 <b>730</b> 30808 <b>740</b>	
0896 0 0897 0	1474 3430	D(			30B08750	
0898 0	FFFF	DO			30808760	
0070 0					30B08770	
0899 0	923E	AWAS DO		WAS	30B08 <b>780</b>	
089A 0	9AU0	DC			30B08 <b>790</b>	
C89B 0	FFFF ₁	DO	; /FFFF		30808800 30808810	
nanc n	219A	* ASB DO	/219A	S/B - DATA ERROR	30808820	
089C 0 089D 0	BC1A	D(			30808830	
089E 0	2184	DC			30BU8840	
089F 0	2132	DO			30B08850	
0 0A80	3E9E	DC	; /3E9E		30808860	
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PAPER TAPE	READER/PUNCH F	UNCTION TEST		
08A1 0 3E 08A2 0 36		DC /3E21 DC /3662		308088 <b>70</b> 30808880
08A3 0 62 08A4 0 FF	00 FF.	DC /6200 DC /FFFF	NDDY	30B08890 30B08900 30B08910
08A5 0 76 08A6 0 32 08A7 0 FF	A6	DC /7662 DC /32A6 DC /FFFF	NRDY	30B08920 30B08930
08A8 06	*	END PTBGN		30808940 3080895 <b>0</b>

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

0000,0825 LOG 0163 LOGBY 0167 05E3,06A9,06D4 LOOP 0647 079E,07FF 0821 LREAD 067D LRTN 0682 068A,0691,0699,086E MARK U83F U619, 061E, 0667, 077E, 083B MLSCF 05E 5 075F 05F7,0789 NIPES 0701,0702,0704,0708 O7FA NOLNE 0870 NRIPX 084A NRTN 0680 067C NIST 07E8 063A, 07B2, 07CC, 07F4 0866 ONEEX 0875 PDSwX 0638 0633 PID 0500 05F9,0607,060F PIN11 061E PINT3 05F5,0603,060B 061C 06E9 PNRDY 0888 06EF, 073B 074F POFF 0621.0643 POINT 05E9 06BC, 06F1, 0707, 075B, 077B, 0798, 07C9, 07DC, 0806, 0814 **PRDSW** 0809 **PTBGN** 08A8 0787,0828 PTL OG 0822 072F 068D,06D7 PUNH 0663 RAD 05DE 06DB RASH 06DE RDBS 0746 06C4 079B 0695,069F,0807 RDIT RDITD 078E 0781,0704 RDITE 0807 07CB RDITO 0749 07A7 RDITI 07C5 RDIT2 07CC 07AD RDIT3 0707,07F5 07DF RDIT4 07EE O7CD RDIT5 O7FC C802 07F.1 RDIT6 07F6 0787 READ 079C 05E4, 05E6 RESRT 0634 0648,064E,0656,0658,065B,065F,0780 RID 0,500 RIDCK 067D RLCF 0168 062F,06F9,078C RMASK 0748 RNR DY 0886 06FF 074E 0705, 0718, 0763, 0793 ROFF ROKB 018C 0000 ROTY 0188 0693,069C,06A4,06AC,06CO,06FA,070B,07E1 RRDY 06F6 RRDY2 0703 06FD RTNCM 067C 065A 0669 RTNSW 0165 RTN1 068A 0690 087F RTNIA 068F 0641,067E,0689 RTN11 0684 RTN2 0691 067F,0698 0880 RTN2A 0695 0680,06A2 RTN3 0699 0881 RTN3A 069F 0688 RTN4 0646 0882 RTN4A 06AF RTN4I 0682,06CB,06D0,0883 RTN5A 06C2 RTN5E 06C4 0600 WOODE HOUSE RTNSD RTTBL 0661,067A,067C,067D .067E 07A3,07A5,07C5 SAVIT 07E9 SINT 05F1 0626,0627 0783

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PAPER TAPE READER/PUNCH FUNCTION TEST

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PAPER TAPE READER/PUNCH FUNCTION TEST

SPUR	0755	0617
SRIPX	084F	0871
START	0161	0000,066C,075D,083D
SVKB	OIBD	
SWCMP	0683	064B,06AB,06D3
SWO	05DF	
SW1	05E0	0649,0654,06A6,06Dl
SW2	05Ē1	0637,07B8,07BC,07EE
Sw3	05E2	•
TEAL	U88A	07B5
TERM	05E8	
TIME	0830	06F3,0709,0714,0728,0737,0837,0839
TIMEX	0816	0833, 0834
TIME	0839	0836
TRIAL	07EC	07C3,07D5
WASSB	0884	07F 7
MHAT	0870	0848
WRECK	0643	0678,0686,0609
XBSYX	0799	
XCHAR	081F	06B3, U6C9, 073E, 07A9, U7FB, 0802, 0840, 084C, 084F, 0851
		0856, 0865
XFEED	0716	069D,06AD
XIDFD	0742	070F,0723
XIORR	0744	06AF, 07AO, 07A4
XIOSD	0740	05EA, 06B6, 06E1, 06F7, 0710, 0724, 0733
XIOXX	073Ę	0722,0732
XIT	0621	0616,0618
XKRDY	06E0	068C,069B,06AB,06D6,06E4,06F5
XKRD2	06ED	06E7
XMASK	0749	0630,06E3

PROG ID 0308-2 PAGE 9 District Assessment of the second sec TABLE OF CONTENTS PARAGRAPH PAGE PROGRAM REQUIREMENTS **EQUIPMENT REQUIREMENTS** PROGRAM LOADING 3.1 PROGRAM DPERATION 3.2 3.2.1 PROGRAM CONTROL OPTIONS - FUNCTION O 3.2.2 ROUTINE SELECTION - FUNCTION 1 3.2.3 OPTIONAL CONTROL 3.2.4 LOCK ON FUNCTION CONTROL HALTS 3.3 NORMAL HALTS 3.3.1 3.3.2 ERROR HALTS PROGRAM TERMINATION 3.4 RESTART STATUS MESSAGES ERROR MESSAGES TYPICAL PROGRAM PASS TEST PROCEDURE 5.2.1 TEST ORGANIZATION 5.2.2 ERROR CHECKING ROUTINE DESCRIPTION 5.3 5.3.1 TEST SEQUENCE CONTROL ROUTINE - CNTRL 5.3.2 NORMAL TEST ROUTINE 5.3.3 OPTIONAL TEST ROUTINE 5.3.4 TEST SUBROUTINES 5.3.5 ERROR CONTROL ROUTINES 5.3.6 INTERRUPT ROUTINE 6.1 SAMPLE DUTPUT 1. PURPOSE THE 1132 FUNCTION TEST IS DESIGNED TO CHECK THE OPERATING PERFORMANCE OF THE 1132 PRINTER AND TO AID IN ITS PROPER ADJUSTMENT. 2. PREREQUISITES 2.1*** PROGRAM PREREQUISITES DIAGNOSTIC MONITOR II 2.2*** EQUIPMENT PREREQUISITES 1. 1131 CPU WITH PROGRAM LOAD FROM CARDS OR PAPER TAPE AND THE FOLLOWING EC'S 419622, 419625, 419633.
2. 1132 PRINTER WITH EC 419621. 3. AT LEAST 2000 HORDS OF AVAILABLE CORE STORAGE. ANY CARRIAGE TAPE. SEE SECTION 5.3.2.8

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4154900

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4154908

EC NO. 415490

1132 PRINTER FUNCTION TEST

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM
1132 PRINTER FUNCTION TEST

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## 3. OPERATING PROCEDURE

THESE OPERATING PROCEDURES APPLY TO SINGLE PROGRAM OPERATION ONLY. FOR OVERLAP OPERATION REFER TO SECTION 3.2.3 OF THE 1130 DIAGNOSTIC MONITOR II DOCUMENTATION.

#### 3.1*** PROGRAM LOADING

STANDARD MONITOR LOADING PROCEDURES APPLY

THESE PROCEDURES ARE SUMMARIZED HERE. SEE DM USE PROCEDURE FOR DETAILS.

- 1. SET FIRST TYPEWRITER TAB 20 CHARACTERS FROM LEFT MARGIN.
- 2. SET BIT SWITCH 15 OFF LOAD AND GO

ON - TO HALT AFTER LOADING

IF HALTED AFTER LOADING, SELECT PROGRAM OPTIONS THEN TURN OFF HALT SWITCH OR FOLLOW NORMAL RESTART PROCEDURE (SEC 3.5)

3. LOAD DIAGNOSTIC MONITOR, AND 1132 FUNCTION TEST.

#### 3.2*** PROGRAM OPERATION.

DATE

## 3.2.1 PROGRAM CONTROL - FUNCTION O

- 1. SET SWITCHES 0-7 TO 01.
- SET SWITCHES 8-15 FOR DESIRED FUNCTION.

SW	FUNCTION
8	RESTART
9	ROUTINE START MESSAGE
10	LOCK ON FUNCTION
11	LOOP PROGRAM
12	LOOP ON ERROR
13	BYPASS ERROR PRINTOUT AND 1132 PRINT
14	HALT ON ERROR
15	HALT

PRESS INT REQ KEY ON CONSOLE.

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3.2.2 ROUTINE SELECTION - FUNCTION 1

1132 PRINTER FUNCTION TEST

THE SELECTED ROUTINE WILL LOOP UNTIL A NEW ROUTINE IS SELECTED.

1. TO SET ROUTINE SELECTION A. SET SWITCHES 0-7 TO 41.

16M MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

B. SET ROUTINE NUMBER IN SWITCHES 12-15.

•	RTN.	DESCRIPTION	
41	1 2 3 4 5 6 7 8	EMIT SEQUENCE PRINT SCAN CHECK INDICATOR SPACE WITH PRINTER OF SPACE WITH PRINTER ON RIPPLE PRINT PRINT ALL CHARACTERS STRESS TEST CHANNEL IDENTIFICATION SKIP WITH PRINTER ON	NORMAL ROUTINES— THE PROGRAM STARTS WITH ROUTINE 1, RUNS EACH ROUTINE IN SEQUENCE THEN TERMINATES AFTER ROUTINE A.
	B *	BIT SWITCH CONTROL	OPTIONAL ROUTINES - RUN     ONLY IF SELECTED

= REFER TO SECTION 3.2.3 FOR SPECIAL INSTRUCTIONS.

- C. PRESS INT REQ KEY ON CONSOLE.
- 2. TO RESET ROUTINE SELECTION SET AS IF SELECTING ROUTINE ZERO.

## 3.2.3 OPTIONAL CONTROL

1. PRINT ANY CHARACTER

TEST ROUTINE B ALLOWS THE C.E. TO SPECIFY THROUGH THE BIT SWITCHES THE CHARACTER HE DESIRES TO PRINT AND THE COLUMN IN WHICH IT WILL BE PRINTED. ONLY ONE CHARACTER WILL BE PRINTED ON EACH LINE.

TO SPECIFY THE CHARACTER AFTER SELECTING ROUTINE B

- SET COLUMN NUMBER (IN BINARY) IN SWITCHES 1-7.
- B. SET THE CHARACTER CODE IN SWITCHES 8-15.
- C. TURN ON SWITCH O.
- 2. MODIFY SPACE IDLE TIME

IN ALL ROUTINES THE PROGRAM WILL NORMALLY TAKE 16 IDLES BEFORE SPACING AFTER PRINT. THIS IDLE TIME CAN BE INCREASED OR DECREASED AS FOLLOWS.

- A. SET SWITCHES 0-7 TD C1.
- B. SET SHITCHES 8-15 TO DESIRED NUMBER OF IDLES (IN BINARY)
- C. PRESS INT REG KEY.
- 3. SPECIFY CHANNEL TO SKIP TO

IN ROUTINES 9 AND A. A CHANNEL CAN BE SELECTED BY A FUNCTION 2 SWITCH ENTRY. THE ROUTINE WILL THEN SKIP TO THAT CHANNEL ONLY. AFTER ENTERING THE ROUTINE, THE CHANNEL IS SPECIFIED BY SETTING THE BIT SWITCHES TO BIXXX WHERE XX EQUALS THE DSW BIT CODE FOR THE DESIRED CHANNEL.

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**	*****	*******	***	******	*******
*	СН	ARACTER EMI	TTE	R CODE	
* *	******	*******	***	*****	****
*	CHARACTER	EMIT CODE	*	CHARACTER	EMIT CODE
<b>*</b> -					
*	1	Fl	*	J	D1
•	2	F2	*	K	D2
*	3	F3	*	, L	D3
*	4	F4	*	M	D4
•	5	F5	*	N	D5
•	6	F6	*	0	D6
*	7	F7	*	P	D7
*	8	F8	*	Q	D8
*	9	F9	*	R	D9
*	0	F0	*	E	C5
*	=	7E	*	G	C7
*	<b>. \$</b>	5B	*	W	E6
¢	•	4B	*	. <b>X</b>	£7
*	•	7D.	*	Y	E8
*	•	6B	*	Z	E9
*	)	5D, _/	*	A	C1
*	-	<b>5,8</b> 6,0	*	В	CZ
	(	4D /	*	C	C3
*	. •	4E	*	D	C4
*	/	61	*	F	C6
•	*	5C	*	H	C8
¢	. +	5D	*	1	C9
#			*	Š	E2
*			*	T	E3
¢			*	U	E4
			*	v v	Ē5
¢			*		
* *	****	******	***	****	****

NOTE - THIS TABLE GIVES THE CHARACTERS IN THE NORMAL EMIT CODE SEQUENCE.

# 3.2.4 LOCK ON FUNCTION CONTROL

LOCK ON FUNCTION WILL LOOP ON THE PRIMARY FUNCTION IN EACH ROUTINE AS FOLLOWS.

RTN	FUNCTION
1	IDLE TO CHECK EMIT SEQUENCE
2	IDLE WITH SCAN CHECK
3	LOCK ON 1,2,3,9 OR 39 SPACES
5	SAME AS RTN 3 Print ripple without advancin
	PATTERN
6	PRINT WITHOUT ADVANCING DATA.
7	LOOP ON PRINT
8	LOCK ON SPACE TO CHANNEL
-	OR LOCK ON SKIP TO CHANNEL
9	LOCK ON SKIP TO SAME CHANNEL.
Ā	SAME AS RTN 9

NOTE - IN ROUTINE 3 OR 4, THE 39 SPACES EQUALS ONE REVOLUTION OF THE PLATTEN WHEN THE CARRIAGE IS SET TO 6 LINES PER INCH.

****

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3.3*** PROGRAM HALTS

#### 3.3.1 NORMAL HALTS

HALT NO. (B REG).	DESCRIPTION	•	RESTART ACTION
3001	PROGRAM STOP OR ADDRESS ST	DP •	PRESS START
3002	HALT ON ERROR	•	DISPLAY MODE-PRESS START

# 3.3.2 ERROR HALTS

HALT NO.	DESCRIPTION	RESTART ACTION	
30F1	CHECK SUM ERROR ON FIRST CARD OF LOADER		
30F2		RELOAD	
30F3 .	CARD 2 OF LOADER DID NOT LOAD	RELDAD	
30F4	CAN NUT CLEAR CORE - DUE TO ERROR IN ADDRESSING UPPER CORE.		
30F5 •	READER CHECK WHEN LOADING MONITOR OR TEST PROGRAM	NPRO THEN PLACE CARDS RUN OUT IN FRONT OF REMAINING DECK AND PRESS START.	
30F6 .	MONITOR DID NOT LOAD	RELOAD	
30F7 :	CHECK SUM WHEN LOADING MONITOR	RELDAD	
30F8 .	READER NOT READY	MAKE READER READY	
30F9 .	INVALID INTERRUPT WHICH WILL NOT PESET	PRESS RESET AND START	
30FA .		FIX THE CONSOLE PRINTER OR NOP THIS WAIT	

# 3.4*** PROGRAM TERMINATION

IF LOOP PROGRAM HAS NOT BEEN SPECIFIED THE PROGRAM WILL TERMINATE AT THE END OF ROUTINE A. ROUTINE B WILL RUN ONLY IF SELECTED.

IF ANY ROUTINE IS SELECTED THAT ROUTINE WILL LOOP AND WILL NOT TERMINATE.

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3.5*** RESTART

1. SET SWITCHES 0-7 TO 01.

TURN ON SWITCH 8.

3. SET DESIRED CONTROL IN SWITCHES 9-14.

4. PRESS INTERRUPT REQUEST KEY.

4. PRINTOUTS

ALL PRINTOUTS ARE IN THE STANDARD FORMAT.

APPNN DORR AAAA

(MESSAGE)

EPPNN DORR AAAA

(MESSAGE)

WHERE

IDENTIFIES STATUS MESSAGES
IDENTIFIES ERROR MESSAGES

PP IS THE ID OF THE PROGRAM CAUSING THE MESSAGE

THIS WILL BE EITHER OO FOR MESSAGES ORIGINATED BY THE MONITOR OR OC FOR MESSAGES ORIGINATED BY THIS PROGRAM.

NN IS THE MESSAGE SEQUENCE NUMBER

RR IS THE ROUTINE NUMBER

AAAA IS THE ADDRESS OF THE ROUTINE

MESSAGE IS ANY VARIABLE INFORMATION

4.1*** STATUS MESSAGES

A0000

NUM PID ADRS RELF LD

THIS MESSAGE IS PRINTED FOLLOWING THE LOADING OF ANY PROGRAM (EXCEPT MONITOR). THE MESSAGE GIVES THE LOAD SEQUENCE NUMBER, THE PROGRAM ID, THE ADDRESS INTO WHICH THE PROGRAM WAS LOADED, AND THE RELOCATION FACTOR.

A0001

SWS PID

THIS MESSAGE IS PRINTED EACH TIME A VALID SWITCH ENTRY IS READ BY THE MONITOR. THE MESSAGE CONTAINS THE SWITCH SETTING READ TOGETHER WITH THE PROGRAM ID OF THE PROGRAM INTO WHICH THE CONTENTS OF SWITCHES 8-15 WERE STORED. IF THE SWITCH ENTRY CALLED FOR HALT OF ANY PROGRAM, THE WORD HALT WILL FOLLOW THE MESSAGE.

AOCOO OOOR AAAA

ROUTINE START MESSAGE - IF SWITCH 9, FUNCTION 0, IS TURNED ON, THIS MESSAGE WILL BE PRINTED BEFORE THE START OF EACH ROUTINE. R IS THE NUMBER OF THE NEXT ROUTINE AND AAAA IS THE STARTING ADDRESS.

AOCOL GOOR AAAA

NRDY 1132

THE 1132 IS NOT READY.

4.2*** ERROR MESSAGES

THE DSW IS CHECKED FOR ABSOLUTE CORRECTNESS AT ALL TIMES. IF AN ERROR IS DETECTED ONE OF THE MESSAGES BELOW WILL INDICATE THE PROBLEM. IT IS LEFT TO THE OPERATOR TO ANALYZE THE DSW FOR THE SPECIFIC PROBLEM AREA.

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*********** THE 1132 DSW READ EMITTER RESPONSE SKIP RESPONSE SPACE RESPONSE CARRIAGE BUSY PRINT SCAN CHECK PRINTER NOT READY PRINTER BUSY NOT USED CHANNEL 1 CHANNEL 2 CHANNEL 3 CHANNEL 4 11 CHANNEL 5 13 CHANNEL 6 CHANNEL 9 CHANNEL 12 **************

E0001

SWS INVLD

THE SETTING OF SWITCHES 4-7 DID NOT EQUAL THE LOAD SEQUENCE NUMBER OF ANY PROGRAM IN CORE.

E0003

OVR CORE

THE PROGRAM WHICH THE LOADER WAS ATTEMPTING TO LOAD EXCEEDED AVAILABLE CORE. LOADING WAS TERMINATED.

E0004

CKSUM

A CHECK SUM ERROR WAS DETECTED WHILE LOADING THE PROGRAM.
THIS ERROR OCCURS UNDER ANY OF THE FOLLOWING CONDITIONS.

- 1. A CARD IS MISSING OR IS OUT OF SEQUENCE.
- 2. THERE IS AN EXTRA CARD IN THE DECK.
- 3. THE PUNCHED INFORMATION ON THE CARD IS NOT CORRECT.
- 4. DATA WAS LOST OR PICKED UP DUE TO A MACHINE MALFUNCTION.
- 5. DUE TO A CRU MALFUNCTION. THE CHECK SUM WAS NOT CORRECTLY CALCULATED.

WHEN THIS ERROR OCCURS ATTEMPT TO RELOAD THE PROGRAM.

E0005

동안인 다음 말씀하는 말씀들다.

Y ROTE FORMAND MY COOMAXXXX THE METROES AND THE MEDITER BUT ROT

THIS ERROR WILL OCCUR IE AN INTERRUPT OCCURS, BUT THE ILSW WAS NOT CORRECT. N IS THE INTERRUPT LEVEL AND XXXX IS THE ILSW. THIS PRINTOUT WILL ONLY CCCUR IF THE INTERRUPT IS RESET BY A BOSI. NO ATTEMPT IS MADE BY THE ERROR ROUTINE TO RESET THE REQUEST BIT.

- 名名《本·原志》4。 - 解释 3 : 音气度 - 4. 克斯克克 - 医形容 - 医舒适 -

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EOCO1 OOOR AAAA

WAS S/B - STATIC DSW ERR

SOME BIT OTHER THAN NOT READY OR A CHANNEL BIT WAS ON WHEN THE DSW WAS SENSED BEFORE GIVING AN 1132 CONTROL COMMAND. USE THE ABOVE DSW TABLE TO IDENTIFY THE BIT, THEN TAKE APPROPRIATE CORRECTIVE ACTION.

LAST OP - CCCC

EOCO2 OOOR AAAA

FOCO3 OOOR AAAA

EOCO4 OOOR AAAA

WAS S/B - BUSY DSW ERR

THIS DSW WAS SENSED IMMEDIATELY AFTER THE 1132 CONTROL COMMAND IDENTIFIED BY CCCC WAS GIVEN. IF THE COMMAND WAS START PRINTER THE PRINTER BUSY BIT (6) SHOULD BE ON. IF THE LAST OP WAS SPACE OR SKIP THE CARRIAGE BUSY BIT (3) SHOULD BE ON. THE EXPECTED DSW IS IDENTIFIED BY S/B.

LAST OP - CCCC DSW - NO INTRPT XXXX

NO INTERRUPT WAS RECEIVED FOLLOWING THE LAST 1132 CONTROL COMMAND IDENTIFIED BY CCCC. THE DSW WAS SENSED AFTER A TWO SECOND DELAY. IF THE COMMAND WAS NOT RECEIVED, A BUSY ERROR (EOCO2) WILL ALSO BE PRINTED.

LAST OP - CCCC DSW - PRINTER STOPPED

XXXX

THE PRINTER WAS TURNED ON, SOME EMIT INTERRUPTS WERE DETECTED. THE PRINTER STOPPED. NO PRINTER STOP COMMAND WAS GIVEN. THE DSW XXXX WAS SENSED 2 SECONDS AFTER THE LAST INTERRUPT OCCURRED.

LAST DP - CCCC

EOCOS OOOR AAAA

WAS S/B - LEVI DSW ERR

THIS DSW (XXXX) WAS SENSED IN INTERRUPT FOLLOWING THE 1132 CONTROL COMMAND IDENTIFIED BY CCCC. YYYY IS THE EXPECTED DSW.

EOCO6 OOOR AAAA

EMIT BIT FAILURE

THIS ERROR WILL OCCUR IF ANY EMIT BIT IS ALWAYS MISSING (OPEN) OR ALWAYS ON (SHORT). XX WILL BE EQUAL TO FF IF NO BITS ARE MISSING. ANY OPEN BIT WILL BE IDENTIFIED BY A ZERO IN THAT BIT POSITION. YY SHOULD BE 00... ANY SHORTED BIT WILL BE IDENTIFIED BY A 1 IN THAT BIT POSITION.

EOCO7 OOOR AAAA

EMIT INVALD

XXXX

THE FIRST EMIT CHARACTER AFTER A START PRINTER WAS NOT VALID.
THE XXXX EQUALS THE EMIT CHARACTER READ.

IF THIS ERROR PERSISTS, BYPASS THE ERROR TYPE OUT (SWITCH 13).
THE PRINTER WILL THEN PRINT, AND IN ROUTINES 4 AND 5, ANY LINE
BEGINNING WITH AN INVALID CHARACTER WILL BE SKIPPED.

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5955 W

EOCOB OOOR AAAA

WAS S/B - EMIT SEQ ERR - XXXX YYOO

THE LAST EMIT CODE WAS EITHER INVALID OR OCCURRED IN THE WRONG SEQUENCE. YY IDENTIFIES THE EXPECTED EMIT CODE. SECTION 5.4 CONTAINS A TABLE OF EMIT CODES.

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EOCO9 DOOR AAAA

PRINTER DID NOT TURN OFF

A STOP COMMAND WAS GIVEN TO THE PRINTER BUT THE PRINTER DID NOT

EOC10 DOOR AAAA

MULT SPACE INTERRUPTS

MORE THAN ONE SPACE INTERRUPT OCCURRED AFTER A SPACE COMMAND, OR AN UNEXPECTED SPACE INTERRUPT OCCURRED.

EOC11 OOOR AAAA

MULT SKIP INTERRUPTS

AN UNEXPECTED SKIP INTERRUPT OCCURRED.

EOC12 OOOR AAAA

MISSING CHANNEL

ROUTINE 8 SPACES TO A CHANNEL PUNCH IN THE CARRIAGE TAPE, IDENTIFIES THAT CHANNEL, THEN GOES TO THE NEXT CHANNEL. THIS IS REPEATED UNTIL 16 CHANNELS HAVE BEEN IDENTIFIED. IF ANY OF THE 8 CHANNELS IS NOT SENSED, THIS MESSAGE WILL IDENTIFY THAT CHANNEL. CHECK THE TAPE TO DETERMINE IF THAT CHANNEL WAS PUNCHED. FURTHER ANALYSIS OF THE CARRIAGE CONTROL (RTNS 9 + A) WILL ASSUME THAT THE CHANNEL WAS NOT PUNCHED IN THE CARRIAGE TAPE.

E0C13 0008 AAAA

CHANNEL SEQ ER

ROUTINE 8 SPACES TO A CHANNEL PUNCH IN THE CARRIAGE TAPE, IDENTIFIES THAT CHANNEL THEN GOES TO THE NEXT CHANNEL AFTER 16 CHANNELS HAVE BEEN IDENTIFIED, THE PROCESS IS REPEATED WITH SKIPS. THE CARRIAGE IS STOPPED AFTER EACH SKIP INTERRUPT AND THE CHANNEL COMPARED WITH SEQUENCE DETECTED WHEN SPACING. THIS MESSAGE IS PRINTED WHEN ANY DIFFERENCE IN SEQUENCE IS DETECTED ( USUALLY DUE TO A MISSED CHANNEL INTERRUPT OR A CHANNEL NOT DETECTED WHEN SPACING). THE CHANNEL SEQUENCE CAN BE DETERMINED FROM THE 1132 PRINTOUT.

EOC14 OOOR AAAA

MULT CHANNEL BITS

MORE THAN ONE CHANNEL BIT WAS ON IN THE DSW (XXXX).

EOC15 OOOR AAAA

CHANNEL SENSE ER

CHANNEL BITS SENSED IN INTERRUPT AFTER A SPACE RESPONSE (XXXX) ARE NOT EQUAL TO CHANNEL BITS SENSED APPROXIMATELY 1 MILLISEC LATER IN MAINLINE (YYYY). SINCE NO CARRIAGE COMMAND HAS BEEN GIVEN, THE

CHANNEL BITS SHOULD BE THE SAME.

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EOC16 DOOR AAAA

CHANNEL SENSE ER

THE CHANNEL BITS SENSED 1 MILLISECOND AFTER A SPACE RESPONSE (XXXX).

ARE NOT EQUAL TO THE CHANNEL BITS SENSED IMMEDIATELY BEFORE THE

NEXT EXECUTION OF SPACE COMMAND.

EOC17 OOOR AAAA

CARRIAGE BSY

THE CARRIAGE WAS FOUND BUSY BEFORE GIVING A START PRINTER. THE START PRINTER COMMAND WAS NOT GIVEN. THE PROGRAM WILL WAIT IN A LOOP UNTIL THE CARRIAGE GOES NOT BUSY. THE NRDY MESSAGE (AOCOI) WILL BE PRINTED EACH 10 SECONDS. IF THE LAST COMMAND WAS SKIP, THE CARRIAGE DID NOT STOP ON A STOP CARRIAGE COMMAND.

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## 5. COMMENTS

5.1*** TYPICAL PROGRAM PASS

IF NO OPTIONS ARE SELECTED. THE 1132 FUNCTION TEST WILL RUN ROUTINES 1 THROUGH A THEN TERMINATE.

5.2*** TEST PROCEDURE

5.2.1 TEST ORGANIZATION

TESTS ARE ORGANIZED AS FOLLOWS.

- 1. INITIALIZE THE TEST ROUTINE
  - A. CLEAR THE BUFFER
  - B. STOP THE PRINTER
  - C. CHECK FOR READY
  - PRINT HEADER ON 1132
  - E. SET ROUTINE TERMINATION CONTROL
- 2. INITIALIZE FOR THIS PASS THROUGH THE ROUTINE.
- 3. EXECUTE CONTROL COMMAND
- 4. CHECK FOR ERRORS
  - A. CHECK DSW FOR BUSY
  - B. WAIT FOR TIMED PERIOD TIME OUT IF NO INTERRUPT.
  - C. CHECK EMITS FOR VALIDITY AND PROPER SEQUENCE.
  - D. CHECK INTERRUPT DSW
  - E. CHECK CHANNEL BITS
- 5. ANALYZE ERROR DATA AND PRINT ERROR MESSAGES.
- 6. GO TO 2 ABOVE IF LOCK ON FUNCTION.
- 7. ADVANCE FOR NEXT PASS THROUGH THE TEST ROUTINE.
- 8. GD REPEAT THE ROUTINE IF NOT END OF ROUTINE.

#### 5.2.2 ERROR CHECKING

ALL TEST ROUTINES CONTAIN THE FOLLOWING ERROR CHECKING.

- 1. DEVICE STATUS CHECK THE DEVICE STATUS IS READ AND CHECKED AS FOLLOWS (THIS ANALYSIS IGNORES THE CHANNEL BITS SEE 5.2.2-3).
  - A. BEFORE A TEST ROUTINE IS STARTED. THE DSW SHOULD BE ZERO.
    ANY BITS ON OTHER THAN NOT READY OR A CHANNEL BIT WILL BE
    IDENTIFIED BY A MESSAGE (EOCOI). IF NOT READY, THE NRDY
    MESSAGE (AOCOI) WILL BE PRINTED.
  - B. IMMEDIATELY AFTER ANY OPERATION. THE DSW SHOULD SHOW THE PRINTER BUSY AFTER A START PRINTER OR THE CARRIAGE BUSY AFTER A SPACE OR START SKIP. ALL OTHER BITS SHOULD BE OFF. THIS DSW IS SAVED AND CHECKED FOR ERRORS AFTER THE OPERATION IS COMPLETED. A MESSAGE (EOCOZ) WILL IDENTIFY ANY ERRORS.
  - C. IN INTERRUPT. THIS DSW IS COMPARED WITH THE EXPECTED DSW
    AND AN ERROR BIT SET IDENTIFYING ANY DIFFERENCES. THE
    MESSAGE (E0C05) IDENTIFYING ANY ERROR IS PRINTED IN MAINLINE. IF THE INTERRUPT IS EMITTER RESPONSE, THE DSW SHOULD
    SHOW PRINTER BUSY. IF CARRIAGE RESPONSE, THE DSW SHOULD
    SHOW CARRIAGE BUSY. IF SPACE RESPONSE, NO BUSY SHOULD BE
    ON UNLESS THE SPACE WAS GIVEN WITH THE PRINTER ON (ROUTINE4).

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D. BEFORE A START PRINTER COMMAND TO ASSURE THAT THE CARRIAGE IS NOT BUSY. START PRINTER IS IGNORED IF THE CARRIAGE IS BUSY AND AN ERROR MESSAGE (EOC17) IS PRINTED AND THE PROGRAM WILL WAIT IN A LOOP, PRINTING THE NRDY MESSAGE (AOCO1) EVERY 10 SECONDS.

#### 2. EMIT CHECK

WHEN THE PRINTER IS ON AN EMIT RESPONSE OCCURS EVERY 11 MILLISECONDS. THE EMIT CODE FOR THE FIRST RESPONSE AFTER INTERRUPT IS CHECKED FOR A VALID CODE. ALL SUBSEQUENT EMITS ARE CHECKED FOR VALID CODE AND FOR PROPER SEQUENCE.

THE FIRST 100 EMITS AFTER THE FIRST START PRINTER ARE ALSO CHECKED FOR OPEN OR SHORTED EMIT BITS.

# 3. CHANNEL BIT CHECK

THE CHANNEL CODE SHOULD NOT CHANGE FROM THE END OF ONE CARRIAGE COMMAND TO THE START OF THE NEXT. THE CHANNEL CODE IS SENSED IN INTERRUPT, ON RETURN TO MAINLINE FOLLOWING A SPACE RESPONSE INTERRUPT, AND BEFORE THE NEXT SPACE COMMAND. IF ANY CHANGE IN THE CHANNEL CODE IS DETECTED, AN EPROR MESSAGE WILL BE PRINTED (EOC15 OR EOC16).

#### 4. INTERRUPT CHECK

A. FOLLOWING ANY CONTROL COMMAND, THE PROGRAM WILL WAIT IN A TIMED LOOP FOR THE INTERRUPT. EACH TIME AN INTERRUPT OCCURS. THE TIMER IS RESET. THE NUMBER OF INTERRUPTS FOR ANY ONE CONTROL COMMAND IS COUNTED IN INTERRUPT. THE COMPLETION OF ALL OPERATIONS IS DETERMINED IN INTERRUPT.

IF ANY CONTROL COMMAND SHOULD FAIL TO CAUSE AN INTERRUPT RESPONSE, THE INTERRUPT WAIT ROUTINE WILL TIME OUT AND AN ERROR MESSAGE WILL BE PRINTED. IF ANY OPERATION ENDS ABNORMALLY (PRINTER GOES OFF, CARRIAGE STOPS) AN ERROR MESSAGE WILL BE PRINTED.

- B. THE FOLLOWING FAILURES TO GET INTERRUPT ARE DETECTED.
  - (1) NO RESPONSE AFTER A CONTROL COMMAND.
  - (2) PRINTER STOPPED BUT A PRINTER STOP COMMAND WAS NOT. GIVEN.
  - (3) CARRIAGE STOPPED BUT A CARRIAGE STOP COMMAND WAS NOT GIVEN.
- C. THE FOLLOWING EXTRA INTERRUPT WILL BE DETECTED.
  - (1) MORE THAN ONE SPACE RESPONSE AFTER A SPACE COMMAND.
  - (2) EMIT RESPONSE AFTER A PRINTER STOP COMMAND.
  - (3) SKIP RESPONSE AFTER A CARRIAGE STOP COMMAND.

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· 我们就是我们还要说了,我们,要因为我们是我们的人们,这种我们会就是我的心,正是一多的的就是我们的人

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#### 5.3*** ROUTINE DESCRIPTION

THIS SECTION CONTAINS A DESCRIPTION OF THE PROGRAM ROUTINES AND SUBROUTINES IN APPROXIMATELY THE ORDER IN WHICH THEY APPEAR IN THE PROGRAM AS FOLLOWS -

- 1. TEST SEQUENCE CONTROL ROUTINE -
- 2. NORMAL TEST ROUTINES
- 3. OPTIONAL TEST ROUTINES
- 4. TEST SUBROUTINES
- 5. ERROR CONTROL ROUTINES
- 6. INTERRUPT ROUTINES
- 5.3.1 TEST SEQUENCE CONTROL ROUTINE CNTRL

THIS ROUTINE CHECKS THE ROUTINE SELECTION SWITCH (SWI IN THE PROGRAM CONTROL TABLE) AND DETERMINES WHICH TEST ROUTINE IS TO BE RUN NEXT. IF A TEST ROUTINE HAS BEEN SELECTED IT ESTABLISHES A TRANSFER TO THAT ROUTINE. IF NO ROUTINE IS SELECTED A TRANSFER IS ESTABLISHED TO THE NEXT TEST ROUTINE IN SEQUENCE.

THE ROUTINE ADDRESS TABLE (RTTBC) WHICH IS PART OF CNTRL, CONTAINS THE ROUTINE ADDRESS FOR ALL TEST ROUTINES IN THE SEQUENCE IN WHICH THEY ARE TO BE RUN.

THE LAST TEST ROUTINE IN THE NORMAL SEQUENCE IS IDENTIFIED BY THE LABLE NRTN. AFTER THIS ROUTINE IS RUN CNTRL WILL TRANSFER TO MONITOR END AND TERMINATE THE PROGRAM. ROUTINES FOLLOWING THE LABLE NRTN ARE CALLED OPTIONAL TEST ROUTINES AND WILL ONLY BE RUN IF SELECTED.

#### 5.3.2 NORMAL TEST ROUTINES

IF NO TEST ROUTINE IS SELECTED, THESE ELEVEN TEST ROUTINES WILL RUN IN SEQUENCE THEN THE PROGRAM WILL TERMINATE.

1. TEST ROUTINE 1 - EMIT SEQUENCE TEST.

THIS TEST ROUTINE IDLES THE PRINTER FOR 200 READ EMITTER RESPONSE INTERRUPTS. IT CHECKS THAT NO EMIT BITS ARE OPEN OR SHORTED, AND THAT ALL EMITS CODES ARE VALID AND IN THE PROPER SEQUENCE.

2. TEST ROUTINE 2 - PRINT SCAN CHECK INDICATOR TEST.

THIS TEST ROUTINE IDLES FOR THE PRINTER FOR 100 READ EMITTER RESPONSE INTERRUPTS, WITH THE SCAN CHECK BIT (BIT 15 IN CORE LOCATION /0027) SET TO ZERO. THIS WILL FORCE A PRINT SCAN CHECK ERROR. IF NO SCAN CHECK OCCURS AN EOCO5 ERROR WILL PRINT.

3. TEST ROUTINE 3 - SPACE WITH PRINTER OFF.

THIS TEST ROUTINE CHECKS FOR PROPER SPACE RESPONSE FOR BOTH SINGLE AND MULTIPLE SPACES. THE PROGRAM MAITS FOR THE SPACE INTERRUPT AND TURNS OFF THE PRINTER BEFORE GIVING THE NEXT SPACE COMMAND. LOCK ON FUNCTION WILL LOOP ANY SINGLE GROUP OF SPACES.

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4. TEST ROUTINE 4 - SPACE WITH PRINTER ON.

SAME AS ROUTINE 3 EXCEPT THAT THE PRINTER IS TURNED ON BEFORE THE SPACE COMMAND IS GIVEN.

5. TEST ROUTINE 5 - RIPPLE TEST

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THIS TEST ROUTINE PRINTS A RIPPLE PATTERN OF ALL CHARACTERS IN EMIT SEQUENCE. THE PATTERN IS PRINTED BY FLOATING A 'ONE' BIT ACROSS THE PRINT BUFFER (CORE ADDRESSES /0020-/0027). THIS CAUSES ONLY ONE CHARACTER TO BE PRINTED FOR EACH EMIT RESPONSE. TO PRINT ONE LINE 120 EMIT RESPONSES ARE REQUIRED. THE PROGRAM WILL THEN IDLE FOR 16 EMITS BEFORE THE SPACE COMMAND IS GIVEN (THIS SPACE IDLE TIME CAN BE CHANGED BY A FUNCTION 3 SWITCH SETTING). AFTER EACH LINE THE PATTERN IS ROTATED, THUS ALL CHARACTERS WILL BE PRINTED IN EVERY POSITION. EACH LINE REQUIRES 144 EMIT CYCLES. THIS RESULTS IN AN AVERAGE PRINT SPEED OF APPROXIMATELY 37 LINES PER MINUTE.

6. TEST ROUTINE 6 - PRINT ALL CHARACTERS

THIS TEST ROUTINE PRINTS LINES OF ALL ONE CHARACTER.
ALL CHARACTERS ARE PRINTED AT THE SAME TIME. THE
PROGRAM WILL IDLE 16 EMITS BEFORE THE SPACE COMMAND
IS GIVEN (THIS SPACE IDLE TIME CAN BE CHANGED BY A
FUNCTION 3 SWITCH SETTING). SINCE CHARACTERS ARE PRINTED
IN EMIT SEQUENCE, 48 EMIT CYCLES ARE REQUIRED FOR EACH
LINE. THIS RESULTS IN AN AVERAGE PRINT SPEED OF ABOUT
110 LINES PER MINUTE FOR THIS ROUTINE.

7. TEST ROUTINE 7 - STRESS TEST

THIS ROUTINE PRINTS LINES OF ONE CHARACTER WITH A MINIMUM OF TIME BETHEEN LINES. THE ROUTINE SETS THE BUFFER TO ONES AND PRINTS WITH NO DATA CONTROL. AFTER EACH LINE THE ROUTINE WILL IDLE FOR 16 EMIT CYCLES, SPACE, THEN IDLE AN ADDITIONAL 16 EMIT CYCLES BEFORE PRINTING THE NEXT LINE. THIS RESULTS IN AN AVERAGE SPEED OF APPROXIMATELY 150 LINES PER MINUTE. FAILURES SHOWN BY THIS TEST ARE USUALLY THE RESULT OF LOADING OF THE POWER SUPPLY.

8. TEST ROUTINE 8 - CHANNEL IDENTIFICATION

THIS TEST ROUTINE CHECKS FOR PROPER DETECTION OF THE PUNCHES IN THE CHANNEL TAPE BOTH WHEN SPACING AND SKIPPING. THE CARRIAGE CONTROL TAPE MAY BE OF ANY LENGTH WITH ANY SEQUENCE OF PUNCHES SO LONG AS THE TOTAL NUMBER OF PUNCHES DOES NOT EXCEED 16.

THE ROUTINE FIRST SPACES TO EACH CHANNEL PUNCHED IN THE CARRIAGE TAPE, IDENTIFIES THAT CHANNEL BY A MESSAGE PRINTED ON THE 1132, THEN RECORDS THE SEQUENCE IN WHICH THE CHANNELS OCCUR.

AFTER SPACING TO 16 CHANNELS, THE ROUTINE WILL SKIP TO EACH OF THESE CHANNELS. THE CARRIAGE IS STOPPED AFTER EACH CHANNEL RESPONSE INTERRUPT, THE CHANNEL IS IDENTIFIED BY A MESSAGE PRINTED ON THE 1132, THEN THE SEQUENCE OF THE CHANNEL RESPONSE IS COMPARED TO THE SEQUENCE SEEN WHEN SPACING. IF THESE SEQUENCES DO NOT AGREE AN ERROR MESSAGE IS PRINTED.

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9. TEST ROUTINE 9 - SKIP WITH PRINTER OFF.

THIS ROUTINE CHECKS SKIP TO A SPECIFIC CHANNEL. A START SKIP COMMAND IS GIVEN AND EACH CHANNEL RESPONSE CHECKED FOR THE DESIRED CHANNEL. WHEN A MATCH IS FOUND A STOP CARRIAGE IS GIVEN AND THE CHANNEL IDENTIFIED BY AN 1132 MESSAGE. THE CARRIAGE WILL ALSO BE STOPPED AFTER 16 CHANNEL RESPONSES WITHOUT A MATCH.

10. TEST ROUTINE A - SKIP WITH PRINTER ON.

THIS ROUTINE IS THE SAME AS TEST ROUTINE 9 WITH THE EXCEPTION THAT THE PRINTER IS TURNED ON BEFORE THIS SKIP COMMAND IS GIVEN AND KEPT ON WHILE SKIPPING. THIS TESTS FOR INTERACTION BETWEEN READ EMITTER AND SKIP RESPONSES.

## 5.3.3 OPTIONAL TEST ROUTINE -

TEST ROUTINE B - BIT SWITCH CONTROL

THIS TEST ROUTINE ALLOWS THE CE TO SPECIFY THROUGH THE BIT SWITCHES THE CHARACTER HE DESIRES TO PRINT AND THE COLUMN IN WHICH HE WILL PRINT THAT CHARACTER. ONLY ONE CHARACTER WILL BE PRINTED ON EACH LINE.

THE COLUMN NUMBER MUST BE ENTERED IN SWITCHES 1-7, AND THE CHARACTER CODE IN SWITCHES 8-15. PRINTING WILL START WHEN SWITCH O IS TURNED ON.

#### 5.3.4 TEST SUBROUTINES

THE FOLLOWING FUNCTIONS ARE PERFORMED BY SUBROUTINES IN THE PROGRAM.

- 1. INITIALIZE CLEAR THE BUFFER, STOP THE PRINTER, CHECK FOR READY, AND PRINT THE ROUTINE HEADING ON THE 1132.
- 2. PRINT CHECK FOR CARRIAGE BUSY, SET THE SCAN COUNT, START THE PRINTER, CHECK THE BUSY DSW, THEN WAIT FOR THE SCAN COUNT TO GO TO ZERO.
- 3. IDLE SET THE IDLE COUNT, CHECK FOR CARRIAGE BUSY, START THE PRINTER, CHECK THE BUSY DSW, THEN WAIT FOR THE IDLE COUNT TO GD TO ZERO.
- 4. SPACE STOP THE PRINTER, CHECK FOR CHANGE IN CHANNEL CODE, START SPACE, CHECK THE BUSY DSW, THEN WAIT FOR THE SPACE INTERRUPT.
- 5. SKIP SET DESIRED CHANNEL CODE, START SKIP, CHECK BUSY DSW, THEN WAIT UNTIL A CARRIAGE STOP IS GIVEN IN INTERRUPT.
- 6. STOP THE PRINTER STOP THE PRINTER AND RESET ALL PRINTER TEST CONTROL WORDS.
- 7. PRINT 1132 MESSAGE SET UP THE MESSAGE BUFFER USING A MESSAGE CODE IN THE CALLING SEQUENCE. THIS MESSAGE CODE IDENTIFIES THE PHRASES CONTAINED IN THE MESSAGE TABLE WHICH ARE TO BE USED IN THE MESSAGE.
- 8. RIPPLE PATTERN IDLE UNTIL MATCH BETWEEN EMIT AND FIRST CHARACTER IN NEXT LINE. WHEN MATCH FUUND SET FIRST BIT IN BUFFER, INITIALIZE FOR PRINT RIPPLE, THEN GO TO PRINT SUBROUTINE.
- 9. CLEAR BUFFER CLEARS BOTH THE 1132 MESSAGE BUFFER AND

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THE PRINT BUFFER-CORE LOCATIONS /0020-/0027. ALSO SETS THE SCAN COMPLETE BIT - BIT 15 IN CORE LOCATION /0027.

- 10. SET BUFFER TO ONES SETS ALL BITS ON IN CORE LOCATIONS /0020 TO /0027.
- 11. READY CHECKS 1132 FOR READY. PRINTS AN ERROR MESSAGE IF ANY BIT OTHER THAN NOT READY UN. PRINTS NRDY IF NOT READY BIT ON.
- 12. FORM CHECK CHECKS FOR FORMS CHECK AFTER SPACE OR SKIP. PRINTS NRDY IF FORM CHECK.

#### 5.3.5 ERROR CONTROL ROUTINES

1. INTERRUPT WAIT ROUTINE

ALL SUBROUTINES COME HERE AFTER THE START OF AN 1/O OPERATION FROM WHICH AN INTERRUPT IS EXPECTED. THIS ROUTINE RESETS ALL ERROR CONTROL WORDS, SENSES AND STORES THE BUSY DSW, THEN WAITS IN A TIMED LOOP (AT LEAST 2 SECONDS) FOR THE OP COMPLETE INTERRUPT.

IF NO OP COMPLETE INTERRUPT IS RECEIVED THE FOLLOWING ERROR MESSAGES ARE PRINTED.

- A. EOCO2 IF BUSY DSW ERROR
- B. EOCO3 IF NO INTERRUPT

IF AN INTERRUPT IS RECEIVED THIS ROUTINE WILL CHECK FOR PROPER PERFORMANCE OF THE OPERATION. THE FOLLOWING CHECKS ARE MADE AND ERROR MESSAGES PRINTED IF APPROPRIATE.

- A. EOCO2 IF BUSY DSW ERROR
- B. EOCOS IF INTERRUPT DSW ERROR
- C. EOCO6, EOCO7 OR EOCO8 IF EMIT ERROR
- D. EOC15, IF CHANNEL CODE CHANGED AFTER SPACE RESPONSE.

THE ROUTINE WILL THEN CHECK FOR NOT READY (USUALLY DUE TO FORM CHECK). IF NOT READY, NRDY IS PRINTED. IF READY, THE ROUTINE WILL RETURN TO THE 1/O SUBROUTINE FROM WHICH IT WAS ENTERED.

2. PRINT ERROR MESSAGES

THIS ROUTINE PRINTS ALL THE ERROR MESSAGES. IF THE MESSAGE IS THE FIRST ERROR MESSAGE FOLLOWING AN I/O CONTROL COMMAND A LAST OP MESSAGE WILL PRECED THE ERROR MESSAGE. THIS LAST OP MESSAGE WILL IDENTIFY THE LAST I/O CONTROL OPERATION EXECUTED. THE ERROR MESSAGE FOLLOWING REFERS TO ERRORS DETECTED IN THAT OPERATION.

#### 5.3.6 INTERRUPT ROUTINE

ALL INTERRUPTS ARE HANDLED BY A COMMON INTERRUPT ROUTINE. THIS ROUTINE SENSES AND STORES THE DSW, SERVICES THE APPROPRIATE RESPONSE, CHECKS THE DSW FOR EXPECTED BITS, THEN RETURNS TO THE MONITOR INTERRUPT ROUTINE.

1. READ EMIT RESPONSE

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ALL EMIT CODES ARE CHECKED FOR VALIDITY AND FOR PROPER SEQUENCE. THE PRINT BUFFER IS THEN SET UP UNDER CONTROL OF THREE CODE WORDS AS FOLLOWS.

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601 0 602 0 604 0 605 0 606 0 608 0 608 0	CODE 01 4C08060B 0 DOD8 0 9015 01 4C080611 0 1810 0 DOD6 0 DOD2	C N10	LD BSC STO S BSC SRA STO STO		CN20,+ RID RIDCK CN30,+ 16 SW1 RID RID,1	SAVE NEW RTN NUMBER  BR IF VALID RTN  IF INVALID RTN GO  TO RTN ONE  ADV TO NEXT RTN	30C0123 30C0124 30C0125 30C0126 30C0127 30C0128 30C0129 30C0131 30C0131 30C0132
601 0 602 0 604 0 605 0 606 0 608 0 608 0 608 0	CODE 01 4C08060B 0 D0D8 0 9015 01 4C080611 0 D0D6 0 D0D2 01 740105DD 0 COCF	CN10	STO S S S S S S S S S S S S S S S S S S		CN20,+ RID RIDCK CN30,+ 16 SW1 RID RID,1 RID,1	SAVE NEW RTN NUMBER  BR IF VALID RTN  IF INVALID RTN GO  TO RTN ONE  ADV TO NEXT RTN  CHECK FOR END OF	30C0123 30C0124 30C0125 30C0127 30C0128 30C0129 30C0130 30C0131 30C0132 30C0133
601 0 602 0 604 0 605 0 606 0 608 0 608 0 608 0	0 CODE 01 4C08060B 0 DOD8 0 9015 01 4C080611 0 1810 0 DOD6 0 DOD2 01 740105DD 0 COCF 0 900D	CN10	LD BSC STO S BSC SRA STO STO MDX LD S		CN20,+ RID RIDCK CN30,+ 16 SW1 RID RID+1 RID RTNUM	SAVE NEW RTN NUMBER  BR IF VALID RTN  IF INVALID RTN GO  TO RTN ONE  ADV TO NEXT RTN  CHECK FOR END OF  NORMAL SEQUENCE	30C01320 30C01330 30C01340 30C01350
604 0 605 0 606 0 608 0 60A 0 60A 0	CODE 01 4C08060B 0 D0D8 0 9015 01 4C080611 0 D0D6 0 D0D2 01 740105DD 0 COCF	* CN10	STO S S S S S S S S S S S S S S S S S S		CN20,+ RID RIDCK CN30,+ 16 SW1 RID RID+1 RID+1 RID RTNUM	SAVE NEW RTN NUMBER  BR IF VALID RTN  IF INVALID RTN GO TO RTN ONE  ADV TO NEXT RTN  CHECK FOR END OF NORMAL SEQUENCE END OF PROGRAM	30C01236 30C01246 30C0125 30C0127 30C01286 30C01296 30C01310 30C01312 30C01334 30C0135 30C0135
601 0 602 0 604 0 605 0 606 0 608 0 608 0 608 0 608 0	0 CODE 01 4C08060B 0 DOD8 0 9015 01 4C080611 0 1810 0 DOD6 0 DOD2 01 740105DD 0 COCF 0 900D	CN10	LD BSC STO S BSC SRA STO STO MDX LD S BSI		CN20,+ RID RIDCK CN30,+ 16 SW1 RID RID+1 RID RTNUM	SAVE NEW RTN NUMBER  BR IF VALID RTN  IF INVALID RTN GO  TO RTN ONE  ADV TO NEXT RTN  CHECK FOR END OF  NORMAL SEQUENCE	30C01236 30C01246 30C01256 30C01277 30C01286 30C01290 30C01310 30C01316 30C01336 30C01336

C

# 1132 PRINTER FUNCTION TEST

0613 01	C500061C		LD	LI	RTTBL-1	FETCH RETURN ADRS  SET RTN START SW SET MLSCF FOR RETURN GO TO MONITOR  L+1 L+1	30C01390
0615 0	DOC 8		STO	_	RAD		30001400
0616 00	D4000165		STO	L	RTNSW	SET RTN START SW	30001410
06180	DOCD		STO		ML SCF+1	SET MLSCF FOR RETURN	30001420
0619 00	44800161	_ 19	BSI	I	START	GO TO MONITOR	30001430
							30001440
6180	0008	R IDCK	DC		LRTN-RTTB	L+1	30001450
61C 0	000A	RINOM	DC		NRTH-RTTB	L+1	30001460
							30001470
		<b>#</b>					30001480
		* ROU	TINE	A DD	RESS TABLE		30001490
	0430	DTTP	DC		7671	EMIT SEQUENCE TEST SCAN CHECK TEST SPACE TEST SKIP TEST ROTATING PAT TEST ALL CHARACTERS TEST FAST PRINT TEST CHANNEL SEQUENCE TEST SKIP- PRINTER OF MANUAL CONTROL ************************************	30C01500
61D 1 61E 1	043C	KIIBL	. טכ		1217	CLAN CHECK TECT	30001310
61F 1	0650	•	DC		7572	COACE TEST	30001520
620 l	0688		DC		1313 TCT4	CHID TECT	30001550
621 1	0680		טכ		1317 TCTE	DOTATING DAT TEST	30001540
622 1	0464		DC		1312 TCT4	ALL CHAPACTERS TEST	30001560
623 l	OAES		DC DC		1310 TCT7	FACT DRINT TECT	30001500
624 l	0780		DC DC		TSTE	CHANNEL SEQUENCE TEST	30001580
	0767		סכ		1310 TCT0	CRID- DDINTED DEE	30001500
625 1	0171	NOTA	DC		TCTA	CKID- DDINTED ON	30001370
626 1	0027	NKIN	DC DC		TCTR	MANUAL CONTROL	30001610
21 1	085D	LKIN	UL		1310	HAITUAL CURTAUL	30001610
		**	***	**	******	****	30001620
		*****			TEST POLIT	INE 1	30001630
		***	***		・「ひ」 ・「ひ」・		30001650
		4 LHE	CK E		SECTION CE A	NO NORMAL PRINT DOM	30001660
		+ UNE	.un Er	· · · ·	SERVENCE A	IN HOUSE FRIEI COM	30001670
							30001680
420 01	44000040	TCTI	129		TATE 7	CO INTITALIZE POLITINE	30001000
524 V	. THUUUUBAU;	1 21 T	- 821	· L	10048	CMIT TECT	30001070
2A U	4144		שני		100	CHEL LESI	30001700
12F 71	4 D00004C 0	HAND BY	CTV		I DCMI	SET LOOP COUNT	30001720
, ZC UI	9000000		314	-1	EF GR I	JET LUUF CUUNT	30001730
62E A	AC0004CP	₹	CTY	1	4 009	SET LOOP ADDRS	30001740
720 DA	AAAAA	T OI A	714		/8200	721 200 NOUNG	30001750
632 N	, 90000EUU -	. O. A	FOX	1	1	SET IDLE CAT	30001760
632 N	440008D1		128		IDLE	J. 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1	30001770
635 OL	4400001		ACI	7	IUCK	CK FOR LOCK ON FUNCTION	30001780
637 OI	74550608		MUX	ī	LPCNT1	ADV LOOP CAT	30001790
P30 U	70E4		MOX		TOTA	ADV COOL CITY	30001170
634 01	\$\$000k00		ASI	1	CNTRI	GO TO CONTROL RTN	30001810
01			J J I	-		or to continue will	30001820
		* ** **	****	***	******	******	30C01830
					TEST ROUT	GO INITIALIZE ROUTINE EMIT TEST  SET LOOP COUNT  SET LOOP ADDRS  SET IDLE CNT  CK FOR LOCK ON FUNCTION ADV LOOP CNT  GO TO CONTROL RTN  ***********************************	30C01840
		*****	****	**	******	*******	30C01850
		* CHE	CK P	INT	SCAN CHEC	K INDICATOR	30C01860
		*					30001870
							30C01880
63C 01	440008AD	T ST 2	851	L	INTLZ	GO INITIALIZE ROUTINE	30001890
53E 0	0088		DC	_	/0088	SCAN CHECK TEST	30001900
3F 0	6164		LDX	1	100		30001910
540 01	6D0006C8		STX	LĪ	LPCNT	SET LOOP COUNT	30001920
		•			* .	and the second of the second o	30001930
542 Oi	6COOOACB		STX	L	LOOP	SET LOOP ADDRS	30001940
	1810	T 02A		-	16		30C01950
	D4000027		STO	L	39	CLEAR BIT 15 LOC 39	30001960
	660C8A00		LDX		/8A00	SET TO CK FOR SCAN CK	30001970
649 0			LDX		1	SET IDLE CHT	30001980
	440008D1		BSI	L			30001990
	440009EF		BSI		LOCK	CK FOR LOCK ON FUNCTION	30002000
	74FF06C8		MDX		LPCNT,-1		30002010
650 0			MDX		TO2A		30C02020
651 0			BSI		CNTRL	GO TO CONTROL RTN	30002030
						en e	30C02040
			**				30C02050
		* ** **	****	**	******	******	30002060
			ı				
. a. 411	jajan sebala sabar						
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- 11	32	PR INT	ER F	UNC	LION	TES

						TEST ROUT	INE 3	30002070
			****	*****	***	******	******	30002080
			* TH	IS ROL	JT IN	E CHECKS F	OR SPACE RESPONSES	30002090
			* AN	D CHEC	CKS	THE DSW		30C02100
			+					30002110
			*					30002120
0652	01	440008AD	TST3	BSI	L	INTLZ	GO INITIALIZE ROUTINE	30C02130
0654		011D		DC		/011D	SPACE TEST -PRINTER OFF	30C02140
0655	-	63F4		LDX	3	-12		30C02150
0656		6B22		STX	3	T3CTL	SET TEST CONTROL	30002160
	_		•					30C02170
0657	01	6COOOACB		STX	L	LOOP	SET LOOP ADDRS	30C02180
		67800679	T 03A		_	T3CTL	LD CONTROL	30C02190
0658	01	C7000686		LD		T3CTL+13	LD MSG CONTROL	30C02200
06 5 D	0	D011		STO	7	T038		30002210
06 5 E	01	C7000687		LD	L3	T3CTL+14	LD NO. OF LOOPS + SPACES	30C02220
0660		1888		SRT		8		30C02230
	_	D40006C8		STO	L	LPCNT		30C02240
0663		1090		SLT		16	The second secon	30C02250
0664		1808		SRA		8		30002260
0665		D021		STO		SAVE3	SAVE NUMBER OF SPACES	30002270
	Ţ							30C02280
0666	0	C020	T 034	ALD.		SAVE3	LD NUMBER OF SPACES	30002290
0667		DOLE		STO		SCAT		30002270
<b></b>	•							30C02310
								30002320
0668	01	440008F7	T 03C	128	L	SPACE		30C02330
~~~	-	44000011	*		Ţ.	. 3		30C02340
0664	0.1	74FF0686	•	MDX	L	SCNT1	CNT SPACES	30C02350
0660		70FB		MDX	7.5	TO3C	ON STACES	30C02360
	-	44000946		BSI	L		PRINT 1132 MSG	30002370
066F		0000	T 039			*-*	FAINT 1132 N36	30C02310
		440009EF	. 05%	128	L	LOCK	CK FOR LOCK ON FUNCTION	30002390
0010	OI.	440003EF		631		LUCK	CR FOR EOCK ON FORCITOR	30C02400
04.73	01	74FF06C8	_	MDX	L	LPCNT,-1		30C02410
0672 0674		70F1		MDX		TOSAL	and the second	30002410
W 14	٧.,	/UFI		RUA		IUSAL		30C02420
A 76		74026470	•	400		TOCTI O	ADV CONTROL	30C02440
0677		74020679 70El		MDX	L	T3CTL,2 T03A	ADV CONTROL	30C02450
0678	_	4087		128		CNTRL	GO TO CONTROL RTN	30002460
0676	U	7007	*	631		CHIKE	90 IU CONINCE NIN	30C02470
0679	•	0000	. •	L DC		*-*	TEST 3 AND 4 CONTROL	30C02410
06 7A	_	9002	1 30 1	DC		/9002		30C02480
06 7 B	-			DC		/9002 /0501	SPACE 1	30C02500
		0501				,	SDACE 2	
06 7C		9004		DC		/9004	SPACE 2	30002510
0670	-	0502		DC		/0502 /0008	COACE 2	30002520
06 7E		9008		DC		/9008	SPACE 3	30002530
067F	_	0303		DC		/0303	CDACE 4	30002540
0680		9010		DC		/9010	SPACE 4	30C02550
0681		0304		DC		/0304	CDACE O	30002560
06 82	-	9080		DC		/9080	SPACE 9	30C02570
06 83		0109		DC		/0109		30002580
06 84		9200		DC		/9200	SPACE 39	30C02590
0685		0127		DC		/0127		30C02600
		0000		DC		+-+		30C02610
0687	0	0000		3 DC		+-+		30002620
						*		30C02630
				*****	1* **		*******	30C02640
						TEST ROUT		30C02650
		•					******	30C02660
							S SPACE COMMANDS IN	30002670
			_				RINTER ON. CHECK IS MADE	30C02680
							ND FOR PROPER DSW	30002690
				*****	** **	******	************	30C0270C
			er e ri 🛊 i i				en la companya de la	30002710
88 20	01	440008AD		BSI			GO INITIALIZE ROUTINE	30002720
06 8 A	0	021E	and the second	DC		/021E	SPACE TEST -PRINTER ON	30002730
								30C02740

DATE 02JAN66 01MAY66 01JUL66 15NOV66 03APR67 EC NO. 415490 415490B 415490C 419643 419643D

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1132 PRINTER FUNCTION TEST

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PART NO. 2191220

PROG 1D 030C-2

1132 PRINTER FUNCTION TEST

	1351			•	_11		30C02750
88 0			LDX		-12 Tacti	SET TEST CONTROL	30C02760
8C 0	6BEC	_	314	7	TSCTL	SET TEST CONTROL	30002770
en n1	6C000ACB	_	STX		LOOP	SET LOOP ADDRE	30002780
	67800679	T 04 A			TOOP	SET LOOP ADDRS LD CONTROL	30C02790
	C7000686	1044	LD		TACTIALA	LD MSG CONTROL	30C02800
93 0	D011	-	STO	LJ	TO48	ED HIS CONTROL	30C02810
	C7000687		LD	12	T3C TI 414	LD NO. OF LOOPS + SPACES	30002020
	1888		SRT	LJ	8	ED NO. OF LODES & SPACES	30C02830
97 0	D030		STO		LPCNT		30C02840
	1090	-	SLT		16		30C02850
99 0			SRA		8		30C02860
9A 0			STO		SAVE3	SAVE NUMBER OF SPACES	30C02870
,,,	0000		3.0		3~103	SATE MONDER OF STREET	30C02880
98 0	COER	TOSAL	10		SAVES	LD NUMBER OF SPACES	30C02890
	D4000C03		STO	L	SPCSX	SET TO SPACE IN INT	
9E 0			LDX	_1			30002910
	66008200		LDX		/8200		30002920
	440008D1		BSI		IDLE		30002930
		•		_			30002940
10 64	44000946		BSI	L	PMSG	PRINT 1132 MSG	30002950
A5 0	0000	T 04 B		_	*-*		30002960
	-	*	- •		•		30C02970
6A6 01	440009EF		BSI	L	LOCK	CK FOR LOCK ON FUNCTION	
		A .		_			30C02990
6A8 O1	74FF06C8		MDX	L	LPCNT,-1		30003000
	70F0		MDX		TO4A1		30003010
		•					30003020
6AB 01	74020679		MDX	L	T3CTL.2	ADV CONTROL	30003030
-	70E1		MDX		TO4A		30C03040
	44000600		BSI	L	CNTRL	GO TO CONTROL RTN	30003050
		_					30C03060
		•			TEST ROUTI	**************************************	30C03070 30C03080
		*		* **	TEST ROUTI	**************************************	30C03070 30C03080 30C03090
		*		* **	TEST ROUTI	**************************************	30C03070 30C03080 30C03090
		* ***** * TH: * PA	**** IS RO TTERN	*** 1110	TEST ROUTI	**************************************	30C03070 30C03080 30C03090
		* ***** * TH: * PA	**** IS RO TTERN	*** 1110	TEST ROUTI ********** NE PRINTS A GENERATED	**************************************	30C03070 30C03080 30C03090 30C03100 30C03110
		* * TH: * PA: * TH: *	**** IS RO TTERN E PRI	TTU	TEST ROUTI	**************************************	30C03070 30C03080 30C03090 30C03100 30C03110
6BO 01	440008AD	* * TH: * PA: * TH: *	**** IS RO TTERN E PRI	TTU	TEST ROUTI	RESTANTANT OF THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE	30C03070 30C03080 30C03090 30C03100 30C03110 30C03120 30C03130 30C03140 30C03150
	440008AD 0408	* * TH: * PA: * TH: *	**** IS RO TTERN E PRI	TTU	TEST ROUTI	**************************************	30C03070 30C03080 30C03090 30C03100 30C03110 30C03120 30C03130 30C03140 30C03150 30C03160
680 01 682 0		* * TH: * PA: * TH: *	IS ROTTERNE PRI	UTI IS NT	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408	RESTANTANT OF THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE	30C03070 30C03080 30C03090 30C03110 30C03110 30C03120 30C03130 30C03140 30C03150 30C03160 30C03170
6B2 0		* ***** * TH: * PA' * TH: * TST5	IS ROTTERNE PRI	UTII IS NT	TEST ROUTI	ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST	30C03070 30C03080 30C03100 30C03110 30C03120 30C03130 30C03150 30C03150 30C03160
682 0 683 0	0408	* * * * * * * * * * * * * * * * * * *	IS ROTTERNE PRI	UTII IS NT	TEST ROUTI	RESTANTANT OF THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE	30C03070 30C03080 30C03100 30C03110 30C03120 30C03130 30C03150 30C03150 30C03160 30C03170 30C03180 30C03190
682 0 683 0 684 01	0408 61CF 6D00098C	* * * * * * * * * * * * * * * * * * *	BSI DC LDX	L L	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1	ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT	30C03070 30C03080 30C03100 30C03110 30C03120 30C03130 30C03140 30C03150 30C03160 30C03170 30C03180 30C03190 30C03190
682 0 683 0 684 01	0408 61CF 6D00098C 6132	* * * * * * * * * * * * * * * * * * *	BSI DC LDX STX	UTII IS NT	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1	ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST	30C03070 30C03080 30C03100 30C03110 30C03120 30C03130 30C03140 30C03150 30C03160 30C03170 30C03180 30C03190 30C03200 30C03210
5B2 0 5B3 0 5B4 01	0408 61CF 6D00098C 6132	* ***** * TH: * PA: * TH: * TST5 * T O5A	BSI DC LDX	UTII IS NT	TEST ROUTI ******** NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1	ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT	30C03070 30C03080 30C03100 30C03110 30C03120 30C03130 30C03140 30C03150 30C03160 30C03170 30C03180 30C03190 30C03200 30C03200
582 0 583 0 584 01 586 0 587 0	0408 61CF 6D00098C 6132 690E	* * * * * * * * * * * * * * * * * * *	BSI DC LDX STX	UTIII IS NT	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES	ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT	30C03070 30C03080 30C03100 30C03110 30C03120 30C03130 30C03140 30C03150 30C03160 30C03170 30C03180 30C03190 30C03200 30C03210 30C03210 30C03220 30C03220
582 0 583 0 584 01 586 0 587 0	0408 61CF 6D00098C 6132	* ***** * TH: * PA: * TH: * TST5 * T 05A	BSI DC LDX STX	UTIII IS NT	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1	ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT	30C03070 30C03080 30C03100 30C03110 30C03120 30C03130 30C03150 30C03150 30C03160 30C03170 30C03180 30C03190 30C03210 30C03210 30C03220 30C03220 30C03220
582 0 583 0 584 01 586 0 587 0	0408 61CF 6D00098C 6132 690E	* * TH: * PA: * TH: * TST5 * T 05A	BSI DC LDX STX	UTIII IS NT	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES	ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT	30C03070 30C03080 30C03100 30C03110 30C03120 30C03130 30C03150 30C03160 30C03170 30C03180 30C03190 30C03200 30C03200 30C03220 30C03220 30C03220 30C03230 30C03230
682 0 683 0 684 01 686 0 687 0	0408 61CF 6D00098C 6132 690E 6C000ACB	* * * TH: * PA: * TH: * TST5 * * T 05 A * *	BSI DC LDX STX LDX STX	**** UTII IS NT L 1 L1 L1	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP	RE 5 ************************************	30C03070 30C03080 30C03100 30C03110 30C03120 30C03140 30C03150 30C03160 30C03170 30C03180 30C03190 30C03200 30C03200 30C03200 30C03220 30C03220 30C03220 30C03220 30C03220
682 0 683 0 684 01 686 0 687 0 688 01	0408 61CF 6D00098C 6132 690E 6C000ACB	* * TH: * PA: * TH: * TST5 * T 05A	BSI DC LDX STX LDX STX	**** UTII IS NT L 1 L1 L	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL	RE 5 ************************************	30C03070 30C03080 30C03100 30C03110 30C03120 30C03140 30C03150 30C03160 30C03170 30C03180 30C03190 30C03200 30C03200 30C03200 30C03200 30C03200 30C03200 30C03200 30C03220 30C03220 30C03220 30C03230 30C03250 30C03250
682 0 683 0 684 01 686 0 687 0 688 01	0408 61CF 6D00098C 6132 690E 6C000ACB	* * * TH: * PA: * TH: * TST5 * * T 05 A * *	BSI DC LDX STX LDX STX	**** UTII IS NT L 1 L1 L1	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP	RE 5 ************************************	30C03070 30C03080 30C03100 30C03110 30C03120 30C03130 30C03150 30C03150 30C03160 30C03170 30C03180 30C03210 30C03200 30C03220 30C03220 30C03250 30C03250 30C03250 30C03260 30C03260 30C03270 30C03280
682 0 683 0 684 01 686 0 687 0 688 01 68A 01 68C 01	0408 61CF 6D00098C 6132 690E 6C000ACB 44000982 440009EF	* ***** * TH: * PA: * TH: * TST5 * * TO5A * * TO5C	BSI DC LDX STX LDX STX STX BSI BSI BSI	#### UTII IS NT 	TEST ROUTI ******** NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL LOCK	ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT SET LOOP ADDRS GO PRINT ONE RIPPLE LINE CK FOR LOCK ON FUNCTION	30C03070 30C03080 30C03190 30C03110 30C03120 30C03130 30C03150 30C03150 30C03160 30C03170 30C03180 30C03210 30C03210 30C03220 30C03220 30C03250 30C03250 30C03250 30C03250 30C03250 30C03260 30C03270 30C03280 30C03290
682 0 683 0 684 01 686 0 687 0 688 01 688 01 686 01	0408 61CF 6D00098C 6132 690E 6C000ACB 44000982 440009EF 7401098C	* * * TH: * PA: * TH: * TST5 * * T 05 A * *	BSI DC LDX STX LDX STX BSI BSI BSI BSI BSI BSI BSI BSI	**** UTII IS NT L 1 L1 L	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL	ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT SET LOOP ADDRS GO PRINT ONE RIPPLE LINE CK FOR LOCK ON FUNCTION ADV CHAR FOR NXT SCAN	30C03070 30C03080 30C03100 30C03110 30C03120 30C03140 30C03150 30C03160 30C03160 30C03170 30C03180 30C03190 30C03210 30C03210 30C03220 30C03230 30C03250 30C03250 30C03250 30C03250 30C03260 30C03280 30C03280 30C03290 30C03290 30C03290
682 0 683 0 684 01 686 0 687 0 688 01 688 01 686 01 680 0	0408 61CF 6D00098C 6132 690E 6C000ACB 44000982 440009EF 7401098C	* ***** * TH: * PA: * TH: * TST5 * * TO5A * * TO5C	BSI DC LDX STX LDX STX STX BSI BSI MDX NOP	UTIII IS NT	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL LOCK RIPL3+1,1	RES RES ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT SET LOOP ADDRS GO PRINT ONE RIPPLE LINE CK FOR LOCK ON FUNCTION ADV CHAR FOR NXT SCAN SAFETY NOP	30C03370 30C03080 30C03100 30C03110 30C03120 30C03140 30C03150 30C03160 30C03170 30C03180 30C03200 30C03210 30C03220 30C03220 30C03220 30C03250 30C03250 30C03250 30C03270 30C03270 30C03280 30C03290 30C03290 30C03300 30C03310
582 0 583 0 584 01 586 0 587 0 588 01 588 01 560 0 561 01	0408 61CF 6D00098C 6132 690E 6C000ACB 44000982 440009EF 7401098C 1000 74FF06C6	* ***** * TH: * PA: * TH: * TST5 * * TO5A * * TO5C	BSI DC LDX STX LDX STX STX BSI BSI MDX MDX	#### UTII IS NT 	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL LOCK RIPL3+1,1 LINES,-1	RES RES ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT SET LOOP ADDRS GO PRINT ONE RIPPLE LINE CK FOR LOCK ON FUNCTION ADV CHAR FOR NXT SCAN SAFETY NOP ADV LINE CNT	30C03370 30C03080 30C03190 30C03110 30C03120 30C03140 30C03150 30C03160 30C03170 30C03180 30C03190 30C03200 30C03200 30C03200 30C03220 30C03220 30C03280 30C03270 30C03270 30C03280 30C03290 30C03290 30C03310 30C03320
682 0 683 0 684 01 686 0 687 0 688 01 688 01 688 01 660 0	0408 61CF 6D00098C 6132 690E 6C000ACB 44000982 440009EF 7401098C 1000 74FF06C6	* * * * * * * * * * * * * * * * * * *	BSI DC LDX STX LDX STX STX BSI BSI MDX NOP	UTIII IS NT	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL LOCK RIPL3+1,1	RES RES ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT SET LOOP ADDRS GO PRINT ONE RIPPLE LINE CK FOR LOCK ON FUNCTION ADV CHAR FOR NXT SCAN SAFETY NOP	30C03370 30C03080 30C03100 30C03110 30C03120 30C03140 30C03150 30C03150 30C03160 30C03170 30C03180 30C03210 30C03200 30C03220 30C03220 30C03250 30C03250 30C03250 30C03250 30C03270 30C03280 30C03280 30C03280 30C03280 30C03280 30C03310 30C03310 30C03310 30C03310
682 0 683 0 684 01 686 0 687 0 688 01 686 01 660 0 661 01 663 0	0408 61CF 6D00098C 6132 690E 6C000ACB 44000982 440009EF 7401098C 1000 74FF06C6 70F6	* ***** * TH: * PA: * TH: * TST5 * * TO5A * * TO5C	BSI DC LDX STX LDX STX STX BSI BSI MDX NOP MDX MDX	**** UTII IS NT L 1 L 1 L L	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL LOCK RIPL3+1,1 LINES,-1 TOSC	RES ************************* ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT SET LOOP ADDRS GO PRINT ONE RIPPLE LINE CK FOR LOCK ON FUNCTION ADV CHAR FOR NXT SCAN SAFETY NOP ADV LINE CNT	30C03370 30C03080 30C03100 30C03110 30C03120 30C03140 30C03150 30C03150 30C03160 30C03170 30C03180 30C03210 30C03200 30C03220 30C03220 30C03250 30C03250 30C03250 30C03250 30C03270 30C03280 30C03280 30C03280 30C03280 30C03280 30C03280 30C03310 30C03310 30C03310 30C03310 30C03310
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682 0 683 0 684 01 686 0 687 0 688 01 668 01 660 0 661 01 663 0	0408 61CF 6D00098C 6132 690E 6C000ACB 44000982 440009EF 7401098C 1000 74FF06C6 70F6 44000600	* * * TH: * PA: * TH: * TST5 * * T 05A * * T 05C * T 05D	BSI DC LDX STX LDX STX STX BSI BSI MDX NOP MDX BSI	**** UTII IS NT L 1 L 1 L L	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL LOCK RIPL3+1,1 LINES,-1 TOSC CNTRL	RES RES ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT SET LOOP ADDRS GO PRINT ONE RIPPLE LINE CK FOR LOCK ON FUNCTION ADV CHAR FOR NXT SCAN SAFETY NOP ADV LINE CNT GO TO CONTROL RTN	30C03370 30C03080 30C03100 30C03110 30C03120 30C03140 30C03150 30C03160 30C03170 30C03180 30C03200 30C03210 30C03220 30C03220 30C03220 30C03250 30C03250 30C03250 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270 30C03270
682 0 683 0 684 01 686 0 687 0 688 01 688 01 660 0 660 0 660 0 660 0	0408 61CF 6D00098C 6132 690E 6C000ACB 44000982 440009EF 7401098C 1000 74FF06C6 70F6 44000600 0000	* * * TH: * PA: * TH: * TST5 * * TO5A * * TO5C * TO5D	BSI DC LDX STX STX STX BSI BSI MDX NOP MDX MDX BSI DC	**** UTII IS NT L 1 L 1 L L	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL LOCK RIPL3+1,1 LINES,-1 TOSC CNTRL	RES ************************* ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT SET LOOP ADDRS GO PRINT ONE RIPPLE LINE CK FOR LOCK ON FUNCTION ADV CHAR FOR NXT SCAN SAFETY NOP ADV LINE CNT GO TO CONTROL RTN LINE CGUNT	30C03370 30C03080 30C03100 30C03110 30C03120 30C03140 30C03150 30C03160 30C03170 30C03180 30C03190 30C03200 30C03210 30C03220 30C03240 30C03250 30C03250 30C03260 30C03270 30C03280 30C03270 30C03280 30C03280 30C03280 30C03370
588 01 588 01 588 01 588 01 588 01 560 0 561 01 563 0 564 01 566 0	0408 61CF 6D00098C 6132 690E 6C000ACB 44000982 440009EF 7401098C 1000 74FF06C6 70F6 44000600 0000 0031	* * * THI * PA * THI * TST5 * * TO5A * * TO5C * TO5D * * LINES NO49	BSI DC LDX STX LDX STX STX BSI BSI MDX MDX MDX BSI DC DC	**** UTII IS NT L 1 L 1 L L	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL LOCK RIPL3+1,1 LINES,-1 TO5C CNTRL 0 49	RES *********************** ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT SET LOOP ADDRS GO PRINT ONE RIPPLE LINE CK FOR LOCK ON FUNCTION ADV CHAR FOR NXT SCAN SAFETY NOP ADV LINE CNT GO TO CONTROL RTN LINE CGUNT	30C03370 30C03080 30C03100 30C03110 30C03120 30C03140 30C03150 30C03150 30C03160 30C03170 30C03180 30C03210 30C03200 30C03220 30C03220 30C03220 30C03250
588 01 588 01 588 01 588 01 588 01 560 0 560 0 560 0 560 0	0408 61CF 6D00098C 6132 690E 6C000ACB 44000982 440009EF 7401098C 1000 74FF06C6 70F6 44000600 0000 0031 0000	* ***** * TH: * PA: * TH: * TST5 * * TO5A * * TO5C * TO5C * TO5C	BSI DC LDX STX LDX STX STX BSI BSI MDX MDX MDX BSI DC DC DC DC DC	UTII IS NT L 1 L1 L	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL LOCK RIPL3+1,1 LINES,-1 TO5C CNTRL 0 49 0	RES ************************ ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT SET LOOP ADDRS GO PRINT ONE RIPPLE LINE CK FOR LOCK ON FUNCTION ADV CHAR FOR NXT SCAN SAFETY NOP ADV LINE CNT GO TO CONTROL RTN LINE CGUNT LOOP COUNT	30C03370 30C03080 30C03100 30C03110 30C03120 30C03130 30C03150 30C03150 30C03160 30C03170 30C03180 30C03210 30C03200 30C03220 30C03220 30C03250 30C03350 30C03350 30C03350 30C03350 30C03350 30C03350 30C03350 30C03350 30C03370 30C03370 30C03380 30C03390
588 01 588 01 588 01 588 01 588 01 560 0 561 01 563 0 564 01 566 0	0408 61CF 6D00098C 6132 690E 6C000ACB 44000982 440009EF 7401098C 1000 74FF06C6 70F6 44000600 0000 0031	* * * THI * PA * TST5 * * TO5A * * TO5C *	BSI DC LDX STX LDX STX STX BSI BSI MDX MDX BSI DC DC DC DC DC DC	UTII UTII IS NT L	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL LOCK RIPL3+1,1 LINES,-1 TO5C CNTRL 0 49 0 50	RES *********************** ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT SET LOOP ADDRS GO PRINT ONE RIPPLE LINE CK FOR LOCK ON FUNCTION ADV CHAR FOR NXT SCAN SAFETY NOP ADV LINE CNT GO TO CONTROL RTN LINE CGUNT	30C03370 30C03080 30C03100 30C03110 30C03120 30C03130 30C03150 30C03160 30C03170 30C03180 30C03190 30C03200 30C03210 30C03220 30C03220 30C03280 30C03280 30C03280 30C03280 30C03290 30C03290 30C03380
682 0 683 0 684 01 686 0 687 0 688 01 660 0 671 01 672 0 673 0 674 01 675 0 677 0 678 0	0408 61CF 6D00098C 6132 690E 6C000ACB 44000982 440009EF 7401098C 1000 74FF06C6 70F6 44000600 0000 0031 0000 0032	* * * TH: * PA: * TH: * TST5 * * TO5A * TO5C * TO5D * LINES NO49 LPCNT NO50 *	BSI DC LDX STX LDX STX STX BSI BSI MDX MDX MDX BSI DC DC DC	#### UTII I I I I I I I I I I I I I I I I I	TEST ROUTI ********* NE PRINTS A GENERATED BUFFER. INTLZ /0408 -49 RIPL3+1 50 LINES LOOP RIPL LOCK RIPL3+1,1 LINES,-1 TO5C CNTRL 0 49 0 50	RES ************************ ROTATING PATTERN. THE BY FLOATING A BIT ACROSS GO INITIALIZE ROUTINE RIPPLE PATTERN TEST SET EMIT CHAR CNT SET LINE COUNT SET LOOP ADDRS GO PRINT ONE RIPPLE LINE CK FOR LOCK ON FUNCTION ADV CHAR FOR NXT SCAN SAFETY NOP ADV LINE CNT GO TO CONTROL RTN LINE CGUNT LOOP COUNT	30C03370 30C03080 30C03100 30C03110 30C03120 30C03130 30C03150 30C03150 30C03160 30C03170 30C03180 30C03210 30C03200 30C03220 30C03220 30C03250 30C03350 30C03350 30C03350 30C03350 30C03350 30C03350 30C03350 30C03350 30C03370 30C03370 30C03380 30C03390

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			* ****	*****	***	********	************	30003430
			*			TEST ROUTI		30C03440
			****	*****	***	*****	******	
			*					30C03460
								30C03470
			* UNT	IL ALL	. 48	B CHARACTER	S HAVE BEEN PRINTED	30003480
			*					30003490
04.6			¥	0.01		TAIT1 7	GO INITIALIZE ROUTINE	30C03500 30C03510
06CC		440008AD 0808	1210	DC B21	L	INTLZ /0808	ALL CHARACTERS	30C03520
UBLL	U	0808	*	UC		70808	ALL CHARACTERS	30C03530
33 ao	0	6100	TOGA	1 DX	1	-48		30C03540
06CE			1007				SET CHAR CNT	30C03550
		6COOOACB				LOOP	SET LOOP ADDRS	30C03560
				• • • • • • • • • • • • • • • • • • • •	_			30C03570
06 D 1	0.	6132	T 06 B	LDX	1	50	SET EMIT LOOP CHT	30C03580
06D2	0	69F5		STX	1	LPCNT		30C03590
			•					30C03600
-		66008200	T 06C				SET DSW S/B	30C03610
06 D 5					1		SET IDLE CNT	30C03620
06 D 6	01	440008D1	_	BSI	L	IDLE		30003630
~ ~ ~	00	4.5000000	* T 04 D			* *	VOI-EMIT TARLE DOCITION	30C03640 30C03650
		65000000 C4000COA	1 000	LDA		EMIT	XR1=EMIT TABLE POSITION CHECK IF CHARACTER IS	30003660
		D40009EE		STO	Ĺ	Alem	STORE EMIT	30C03670
		95000CEA					TO BE PRINTED	30C03680
	_	4C1806E9					YES IF BRANCH	30C03690
			•					30C03700
06 E 2	01	74FF0B1A		MDX	Ĺ	ICNT,-1	SKIP IF INTRPT CNT=1	30C03710
06 E 4	0	70EC		MDX		TOAR		30C03720
06 E 5	01	74FF06C8		MDX	L	LPCNT1		30C03730
06 E 7				MDX		T06C	EMITS - SPACE	30C03740
06 E 8	0	7002	_	MDX		T06E+2	THEN CONTINUE	30003750
a. .		4400005	*	06.		A. 9	CET BOLLIT DIED TO ONES	30003760
		440009CF	T 06 E			A1 1	SET PRINT BUFR TO ONES SET SCAN CNT	30C03770 30C03780
06 E B		440008C6				PRINT	SET SCAN CHI	30C03790
		440009EF					CK FOR LOCK ON FUNCTION	30003170
W L L	•	11000321			_			30003810
06F0	01	740106D9		MDX	L	T06D+1.1	ADV TO NXT CHAR	30003820
		70DE		MDX		TO6B		30C03830
06F3	01	44000600		BSI	Ľ	CNTRL	GO TO CONTROL RTN	30C03840
			*					30C03850
			*					30C03860
				*****	***		******	30003870
			*	****	***	TEST ROUTI	1C	30C03880 30C03890
							NES OF ALL ONE CHARACTER	30003900
			*					30C03910
								30C03920
06F5	01	440008AD	TST7	BSI	L	INTLZ	GO INITIALIZE ROUTINE	30003930
06 F 7	0	8021		DC		/8021	STRESS TEST	30C03940
								30C03950
06F8		6164		LDX		100	SET LINE COUNT	30C03960
06F9	0	69CC	_	STX	1	LINES		30003970
			*				55 T 1 000 ADDD	30003980
		6COOOACB	T 07 4		Ļ		SET LOOP ADDRS	30003990
06FE		440009CF 6101	TOTA	BSI LDX	L	-	SET PRINT AREA TO ONES SET SCAN CNT	30C04000 30C04010
		440008C6		BSI	Ľ	PRINT	GO PRINT	30004020
0701		6110		LDX	ũ		SET FOR 16 IDLES	30004030
		66008200		LDX		/8200	SET DSW S/B	30C04040
		440008D1		BSI	L	IDLE		30C04050
		C4000C0A		LD	L	EMIT		30004060
0708	01	D40009EE		STO	L,	ALEM		30C04070
			*					30C04080
070 A	01	440003EF		BSI	L	FOCK	CK FOR LOCK ON FUNCTION	30C04090
		** *** ***	*	1				30004100
DATE		02 14444	0 144	44 (H 44 15NO	V66 0340047	9906 10

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1132 PRINTER FUNCTION TEST A SAME TO CONTRACT OF THE S

			74FF06C6	MD			UPDATE LINE COUNT	30004110
			70ED	MDX BSI		TO7A	GO TO CONTROL RTN	30C04120 30C04130
i	U/UF	OI	44000600		L	CHIKE	GO TO CONTROL KIN	30C04140
	28 TT			******	;; * * * *	******	************	30C04150
				* INITIAL	LIZAT	ION FOR R	OUTINES 8,9, AND A	30004160
			-	******	***	******	*******	30004170
	4 14 1	4.27	9 Carl 12 2	* THIS RO	OUT. IN	E IDENTIF	LES THE SEQUENCE OF PUNCHES	30004180
				* IN THE	CHAN	NEL CONTR		30004190
	1							30004200
		N. N	0000	*				30C04210 30C04220
	0711 0712	-	,0000 C06C	IN89A DC		*-* SW89A		30004220
9		_	40200775			189AX ,Z	BR IF INITIALIZED	30C04230 30C04240 30C04250
			6869	ST	K .	SW89A		30004250
Ŷ,		_	440008AD		I L	INTLZ	GO INITIALIZE ROUTINE	30C04260
	0718	0	7000	DC		/7000		30C04270
				y •				30C04280
			650000B0				SET FOR 176 SPACES	30004290
		_	69AC	ST		LPCNT	•	30C04300 30C04310
	0710		1810 610F	SR/		.16		30C04310 30C04320
			D50007BE		n 13	15 CH12S-1		30004320
			71FF	MD:	X I	-1		20004340
			70FC	MD		+-4		30C04350
	0722	ō	6101	LO		1		30C04360
	0123	•	0777			TOED+1		30004370
			6D0007CA			SHIFT		30004380
			6D0007CB			SHFT2		30004390
			C4000984 D40007C7	LD ST		K8000 Seqsw	SET SEQ SW	30004400
	UIZA	OI	D40007C7	310		SEASA	351 354 3W	30C04400 30C04410 30C04420 30C04430
				*				30C04430
				* SPACE	TO C	HANNEL S	rodowałają i postar termina i postar i	30C04440 30C04450
				+				
								30004460
			44000946	BS			MSG- SPACE TO CHANNEL	30004470
	072E	0	9000	DC.		/9000	MSG CONTROL	30C04480 30C04490
,	0725	O1	6COOOACB	TOBA ST	y 1	LOOP	SET LOOP ADDRS	30004500
•			4400093A	BS.		STOP	STOP THE PRINTER	30C04510
			440008F7	BS				30C04520
	0735	01	OCOOOB1 A	XI	O L	SENSE-1	RECORD CHANL PUNCH IF	30004530
	0737	01	ECOOOBEE	OR	L	WAS	DETEC IN INTRPT	30004540
	1	-				_	OR MAINLINE	30004550
	0739	_	1008	SL		8 T088 4-		30C04560 30C04570
	0/3A	01	4C18075C	8 S (L	T088, +-	DK IF CHANC DIT UFF	30C04570
	0730		440007CE	BS	ı L	CHMSG	PRINT CHANL ID MSG	30C04580 30C04590
			8500	DC .		/8500	TART WINE ID NO	30C04600
	U. J.	•	3,500	*				30C04610
	073F	01	ECOOO7CD	OR	: L	VCHNL	RECORD EACH CHANNEL	30C04620
	0741	01	D40007CD			VCHNL	DETECTED	30004630
			C40007C7	LD LD				30004640
			1001	SL.		1	and the same of th	30004650
٠.	0746		4C08075C		L L	T088.+		30C04660 30CJ4670
			internal control of the control of t	* AFTER	SECO	NC CHANNE	L. CHECK FIRST 16 CHANNELS	
	•						IEL SEQUENCE.	30004690
		4.4		•			· · · · · · · · · · · · · · · · · · ·	30004700
	0748		668007CA	TOBAL LD	X: 12	SHIFT	XR 2=CHAN BEFORE REPEAT	30C04710
	074A	01	C40007CC	LD		LISEQ		30004720
			1200	SL	A : 2	2 0		30004730
			E40007CC	AN	D F	LTSEQ		30C04740 30C04750
			4C20075A			TOBAZ,Z	BR IF REPEAT	30C04750 30C04760
			668007CB C077	LD		SHFT2		30004770
	0754		F075	EO		SHIFT		30004710
	· UI J4	•						
	DATE		02JAN66	0 1MAY 66	01.	UL66 15	NOV66 U3APR67	PROG ID

415490 4154908 415490C 419643 419643D

0755	0	6A74		STX	2	SHIFT		30C04790
	-	40200748		BSC		TOBAT .Z	BR FOR 2ND CHECK	30004800
		740107CA		MDX	ī	SHIFT.L		30C04810
		740107CB	T 08 A2	MDX	L	SHFT2.1	<u> </u>	30C04820
States Annaharan	12							30C04830
		440009EF	T 08B		L	LOCK	CK LOCK SW	30004840
		C068	3.7.8			SEQSH	en interes en solo en	30C04850
,-	,	4C180764	* 5.	BSC		T08C,+-	DEC LOOP CHT	30C04860 30C04870
		74FF06C8 70CB		MDX		LPCNT,-1	DEC LOOP CNT	30004870
0165	U	1008		HUA		T U GA		30C04890
07.64	0	C068	T 08C	LD		VCHNL	and the second of the second o	30C04900
		F4000BFF		EOR	L	KFF00		30C04910
0767	0	D060	r Literatur	STO	73.4	TEMP8		30004920
		÷					wanata walangan kacamatan	30C04930
		65000000	T 08D			*-*	XR1=CHANNEL NUMBER	30C04940
		44280A5B		BSI	L			30004950
		74010769		MDX	L	TO8D+1,1 TEMP8	ADV TO CK NEXT CHAN	30C04960 30C04970
076F	-	C059 1001		LD Sla		l	SHIFT TO NEXT CHAN	30004970
0770	-			STO		TEMP8	SHITT TO NEXT CHAIN	30004990
		4C200768	447	BSC	Ľ	T08D, Z	BK IF MORE ERRORS	30C05000
	•							30005010
				, ,			egic transition of the second	30C05020
0773		1810		SRA		16		30C05030
0774	0	D052		STO		SEQSW		30005040
					_	50455	ADMANCE TO THE MENT	30005050
		440008F7				SPACE	ADVANCE TO THE NEXT CHANNEL PUNCH BEFORE	30C05060 30C05070
		OCOOOBLA ECOOOBEE	. •	X I O OR	L	SENSE-1	STARTING TEST ROUTINE	30C05080
077B			-	SLA	-	8	STARTING TEST ROUTINE	30005090
	-	4CA00711		BSC	1	IN89A.Z		30005100
077E				MDX		I 8 SAX		30C05110
			. • ;					30C05120
077F	0	0000	SW89A	DC		*-*		30C05130
077F	0	0000				*-*		30C05140
077F	0	0000	***	****	**	\$-\$ *********		30C05140 30C05150
077F	0	0000	****	****	1,2141	TEST ROUT	INE 8	30C05140 30C05150 30C05160
077F	0	0000	****	****	***	TEST ROUT	INE 8	30C05140 30C05150 30C05160 30C05170
077F	0	0000	* **** * ****	***** **** S TES	*** T C	TEST ROUT	INE 8	30C05140 30C05150 30C05160
077F	0	0000	* **** * ****	***** **** S TES	*** T C	TEST ROUT	INE 8 ************************************	30C05140 30C05150 30C05160 30C05170 30C05180
077F			* ***** * **** * THI * PUN	***** **** S TES	* * * T C	TEST ROUT ******** HECKS THAT GENERATE A	INE 8 ************************************	30C05140 30C05150 30C05160 30C05170 30C05180 30C05190 30C05200 30C05210
07.80	01	44000BAD	* **** * ****	***** S TES CH WI	* * * T C	TEST ROUT ********* HECKS THAT GENERATE A	INE 8 ************************************	30C05140 30C05150 30C05160 30C05170 30C05180 30C05180 30C05210 30C05210 30C05220
0780 0782	01 0	440008AD E401	* ***** * **** * THI * PUN	***** S TES CH WI BSI DC	* * * T C	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401	INE 8 ********************** EACH CHANNEL SKIP INTERRUPT.	30C05140 30C05150 30C05160 30C05170 30C05180 30C05190 30C05200 30C05210 30C05220 30C05230
0780 0782 0783	01 0 0	440008AD E401 408D	* ***** * **** * THI * PUN	***** S TES CH WI BSI DC BSI	T C	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A	INE 8 ************************************	30C05140 30C05150 30C05160 30C05170 30C05180 30C05190 30C05200 30C05210 30C05220 30C05230 30C05240
0780 0782 0783 0784	01 0 0	440008AD E401 408D 6202	* ***** * **** * THI * PUN	BSI DC BSI LDX	1 C	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2	INE 8 ********************** EACH CHANNEL SKIP INTERRUPT.	30C05140 30C05150 30C05160 30C05170 30C05180 30C05290 30C05210 30C05210 30C05220 30C05220 30C05230
0780 0782 0783 0784 0785	01 0 0 0	440008AD E401 408D 6202 6E0006C8	* ***** * **** * THI * PUN	BSI DC BSI LDX STX	1 C	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT	INE 8 ********************** EACH CHANNEL SKIP INTERRUPT.	30C05140 30C05150 30C05160 30C05170 30C05180 30C05190 30C05210 30C05210 30C05220 30C05230 30C05230 30C05250 30C05250
0780 0782 0783 0784 0785	01 0 0 0 01 01	440008AD E401 408D 6202 6E0006C8 440008F7	* ***** * **** * THI * PUN	BSI DC BSI LDX STX BSI	1 C LL L	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE	INE 8 ********************** EACH CHANNEL SKIP INTERRUPT.	30C05140 30C05150 30C05160 30C05170 30C05180 30C05200 30C05210 30C05220 30C05220 30C05230 30C05240 30C05250 30C05260
0780 0782 0783 0784 0785	01 0 0 0 01 01	440008AD E401 408D 6202 6E0006C8	* ***** * **** * THI * PUN	BSI DC BSI LDX STX	1 C LL L	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT	INE 8 ********************** EACH CHANNEL SKIP INTERRUPT.	30C05140 30C05150 30C05160 30C05170 30C05180 30C05190 30C05210 30C05210 30C05220 30C05230 30C05230 30C05250 30C05250
0780 0782 0783 0784 0785 0787	01 0 0 0 01 01 01	440008AD E401 408D 6202 6E0006C8 440008F7 44000946	* ***** * **** * THI * PUN * TST8	***** S TES CH WI BSI DC BSI LDX STX BSI BSI	1 C	TEST ROUT ********* HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG	INE 8 ********************** EACH CHANNEL SKIP INTERRUPT.	30C05140 30C05150 30C05160 30C05170 30C05180 30C05200 30C05210 30C05220 30C05220 30C05230 30C05240 30C05250 30C05260 30C05270
0780 0782 0783 0784 0785 0787 0789	01 0 0 01 01 01 0	440008AD E401 408D 6202 6E0006C8 440008F7 44000946 AC00	* ***** * **** * THI * PUN * TST8	BSI DC BSI LDX STX BSI BSI DC	1 C LL L L2 L2 L	TEST ROUT ********* HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACOO	INE 8 ********************** EACH CHANNEL SKIP INTERRUPT.	30C05140 30C05150 30C05160 30C05180 30C05190 30C05200 30C05210 30C05220 30C05230 30C05240 30C05250 30C05250 30C05270 30C05270
0780 0782 0783 0784 0785 0787 0789 0788 078C 078D	01 0 0 01 01 01 0 0	440008AD E401 408D 6202 6E0006C8 440008F7 44000946 AC00 62FF 6A3A	* ***** * **** * THI * PUN * TST8	BSI DC BSI LDX STX BSI BSI DC LDX STX	1 C LL L 2 L2 L	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACO0 -1 TEMP8	INE 8 EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMPS TO ALL BITS	30C05140 30C05150 30C05160 30C05170 30C05180 30C05200 30C05210 30C05220 30C05230 30C05230 30C05250 30C05250 30C05260 30C05270 30C05280 30C05290 30C05310 30C05320
0780 0782 0783 0784 0785 0787 0789 0788 078C 078D	01 0 0 01 01 01 0 0	440008AD E401 408D 6202 6E0006C8 440008F7 44000946 ACOO 62FF 6A3A 6C000ACB	* ***** * **** * THI * PUN * TST8	BSI DC BSI LDX STX BSI DC LDX STX	1 C LL L 2 L2 L	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACO0 -1 TEMP8	INE 8 EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMPS TO ALL BITS	30C05140 30C05150 30C05160 30C05170 30C05180 30C05200 30C05210 30C05220 30C05230 30C05230 30C05250 30C05250 30C05270 30C05270 30C05290 30C05300 30C05300 30C05320 30C05330
0780 0782 0783 0784 0785 0787 0789 0788 078C 078D	01 0 0 01 01 01 0 0	440008AD E401 408D 6202 6E0006C8 440008F7 44000946 AC00 62FF 6A3A	* ***** * **** * THI * PUN * TST8	BSI DC BSI LDX STX BSI DC LDX STX	1 C LL L 2 L2 L	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACO0 -1 TEMP8	INE 8 ******** EACH CHANNEL SKIP INTERRUPT. INITIALIZE	30C05140 30C05150 30C05160 30C05160 30C05180 30C05190 30C05210 30C05210 30C05220 30C05230 30C05240 30C05250 30C05260 30C05270 30C05280 30C05280 30C05290 30C05300 30C05310 30C05320 30C05330
0780 0782 0783 0784 0785 0787 0788 0788 0780	01 0 0 01 01 01 0 0	440008AD E401 408D 6202 6E0006C8 440008F7 44000946 AC00 62FF 6A3A 6C000ACB 658007CA	* ***** * **** * THI * PUN * TST8	BSI BSI BSI LDX STX BSI DC LDX STX STX	2 L2 L2 L L	TEST ROUT ********* HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACOO —1 TEMP8 LOOP SHIFT	INE 8 EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMP8 TO ALL BITS SET LOOP ADDRS LD SHIFT FACTOR	30C05140 30C05150 30C05160 30C05160 30C05180 30C05190 30C05200 30C05220 30C05220 30C05220 30C05240 30C05250 30C05270 30C05270 30C05270 30C05290 30C05290 30C05310 30C05310 30C05320 30C05320
0780 0782 0783 0784 0785 0787 0788 0788 0780	01 0 0 01 01 01 0 0	440008AD E401 408D 6202 6E0006C8 440008F7 44000946 ACOO 62FF 6A3A 6C000ACB	* ***** * **** * THI * PUN * TST8	BSI BSI BSI LDX STX BSI DC LDX STX STX	2 L2 L2 L L	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACO0 -1 TEMP8	INE 8 EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMP8 TO ALL BITS SET LOOP ADDRS LD SHIFT FACTOR	30C05140 30C05150 30C05160 30C05170 30C05180 30C05200 30C05210 30C05220 30C05220 30C05240 30C05250 30C05260 30C05270 30C05280 30C05280 30C05290 30C05310 30C05320 30C05320 30C05330 30C05330 30C05350 30C05350
0780 0782 0783 0784 0785 0787 0789 0786 0780 0780	01 0 0 01 01 0 0 0	440008AD E401 408D 6202 6E0006C8 44000946 AC00 62FF 6A3A 6C000ACB 658007CA	* ***** * **** * THI * PUN * TST8 * TO8E * TO8F *	BSI DC BSI LDX STX BSI DCX STX BSI LDX STX STX	2 L L L L L L 1	TEST ROUT ********* HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACOO —1 TEMP8 LOOP SHIFT TO8X1+1	INE 8 EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMP8 TO ALL BITS SET LOOP ADDRS LD SHIFT FACTOR STO XR1	30C05140 30C05150 30C05160 30C05170 30C05180 30C05190 30C05210 30C05220 30C05230 30C05230 30C05250 30C05260 30C05270 30C05280 30C05280 30C05280 30C05300 30C05300 30C05300 30C05300 30C05340 30C05340 30C05360 30C05370
0780 0782 0783 0784 0785 0787 0789 0780 0780 0780 0790	01 0 0 01 01 0 0 0	440008AD E401 408D 6202 6E0006C8 440008F7 44000946 AC00 62FF 6A3A 6C000ACB 658007CA	* ***** * **** * THI * PUN * TST8 * TO8E * TO8F *	BSI BSI BSI LDX STX BSI DC LDX STX STX	2 L L L L L L 1	TEST ROUT ********* HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACOO —1 TEMP8 LOOP SHIFT TO8X1+1	INE 8 EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMP8 TO ALL BITS SET LOOP ADORS LD SHIFT FACTOR STO XR1 STOP THE PRINTER SET SKIP TO SM	30C05140 30C05150 30C05160 30C05170 30C05180 30C05200 30C05210 30C05220 30C05220 30C05240 30C05250 30C05260 30C05270 30C05280 30C05280 30C05290 30C05310 30C05320 30C05320 30C05330 30C05330 30C05350 30C05350
0780 0782 0783 0784 0785 0787 0789 0788 078C 078D 078E 0790	01 0 0 01 01 0 0 0 01 01	440008AD E401 408D 6202 6E0006C8 440008F7 44000946 ACOO 62FF 6A3A 6C000ACB 658007CA 6908	* ***** * **** * THI * PUN * TST8 * TO8E * TO8F *	BSI BSI BSI BSI LDX STX BSI DC LDX STX STX LDX STX	2 L L 2 L L 1	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACOO —1 TEMP8 LOOP SHIFT TO8X1+1 STOP	INE 8 EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMP8 TO ALL BITS SET LOOP ADORS LD SHIFT FACTOR STO XR1 STOP THE PRINTER SET SKIP TO SM	30C05140 30C05150 30C05160 30C05170 30C05180 30C05190 30C05210 30C05220 30C05230 30C05230 30C05250 30C05260 30C05270 30C05280 30C05290 30C05310 30C05310 30C05330 30C05330 30C05340 30C05350 30C05360 30C05370 30C05380
0780 0782 0783 0784 0785 0787 0788 0786 0780 0790 0792	01 0 0 01 01 0 0 0 01 01 0	440008AD E401 408D 6202 6E0006C8 440008F7 44000946 AC00 62FF 6A3A 6C000ACB 658007CA 6908 4400093A 1810	* ***** * **** * THI * PUN * TST8 * TO8E * TO8F *	BSI BSI BSI BSI LDX STX BSI DC LDX STX STX LDX STX	2 L L 2 L L 1 1	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACOO -1 TEMP8 LOOP SHIFT TO8X1+1 STOP 16	INE 8 EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMP8 TO ALL BITS SET LOOP ADORS LD SHIFT FACTOR STO XR1 STOP THE PRINTER SET SKIP TO SM SET BUSY DSW S/B	30C05140 30C05150 30C05160 30C05160 30C05180 30C05190 30C05200 30C05220 30C05220 30C05220 30C05240 30C05250 30C05260 30C05270 30C05280 30C05280 30C05290 30C05310 30C05310 30C05320 30C05330 30C05350 30C05370 30C05370 30C05370 30C05380 30C05380 30C05380 30C05380 30C05380
0780 0782 0783 0784 0785 0787 0788 0780 0786 0790 0792 0793 0795 0796	01 0 0 01 01 0 0 0 0 0 0 0 0 0 0 0 1	440008AD E401 408D 6202 6E0006C8 44000946 AC00 62FF 6A3A 6C000ACB 658007CA 6908 4400093A 1810 66005000 44000919	* ***** * **** * THI * PUN * TST8	BSI DC BSI STX BSI DC STX BSI CDX STX STX STX STX STX STX STX STX STX	2 L L L L L L L L L L	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACOO —1 TEMP8 LOOP SHIFT TO8X1+1 STOP 16 /5000 SKIP	INE 8 ****************** EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMP8 TO ALL BITS SET LOOP ADORS LD SHIFT FACTOR STO XR1 STOP THE PRINTER SET SKIP TO SM SET BUSY DSW S/B	30C05140 30C05150 30C05160 30C05170 30C05180 30C05190 30C05200 30C05220 30C05220 30C05220 30C05240 30C05250 30C05260 30C05270 30C05280 30C05280 30C05280 30C05300 30C05310 30C05310 30C05350 30C05370 30C05350 30C05360 30C05370 30C05380 30C05380 30C05380 30C05380 30C05380 30C05380
0780 0782 0783 0784 0785 0787 0789 0788 0780 0792 0792 0793 0795 0796	01 0 0 01 01 0 0 0 01 01 0 0 0 01 01	440008AD E401 408D 6202 6E0006CB 440008F7 44000946 ACOO 62FF 6A3A 6C000ACB 658007CA 6908 4400093A 1810 66005000 44000919	* ***** * **** * THI * PUN * TST8	***** STES CH WI BSI BSI BSI LDX STX BSI LDX STX BSI LDX STX LDX STX LDX STX LDX STX	2 L2 L L L L L L L L L L L L L L L L L	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACOO -1 TEMP8 LOOP SHIFT TO8X1+1 STOP 16 /5000 SKIP ***	INE 8 EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMP8 TO ALL BITS SET LOOP ADORS LD SHIFT FACTOR STO XR1 STOP THE PRINTER SET SKIP TO SW SET BUSY DSW S/B RESTORE XR1	30C05140 30C05150 30C05160 30C05170 30C05180 30C05190 30C05210 30C05220 30C05230 30C05230 30C05250 30C05250 30C05270 30C05280 30C05280 30C05290 30C05310 30C05310 30C05330 30C05340 30C05360 30C05370 30C05380 30C05380 30C05380 30C05390 30C05390 30C05400 30C05420 30C05420
0780 0782 0783 0784 0785 0787 0788 078C 078D 0792 0793 0792 0793 0796 0798	01 0 0 0 01 01 0 0 0 0 01 0 0 0 0 0 0 0	440008AD E401 408D 6202 6E0006C8 440008F7 44000946 AC00 62FF 6A3A 6C000ACB 658007CA 6908 4400093A 1810 66005000 44000919 65000000 668007CA	* ***** * **** * THI * PUN * TST8	BSI BSI BSI BSI LDX STX BSI LDX STX BSI LDX STX LDX STX LDX STX LDX	2 L2 L1 L1 L2 L L1 L2 L2 L1 L1 L2 L1 L2 L1 L1 L1 L2 L1 L1 L1 L1 L2 L1	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACOO -1 TEMP8 LOOP SHIFT TO8X1+1 STOP 16 /5000 SKIP *-* SHIFT	INE 8 ******************** EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMP8 TO ALL BITS SET LOOP ADORS LD SHIFT FACTOR STO XR1 STOP THE PRINTER SET SKIP TO SM SET BUSY DSM S/B RESTORE XR1	30C05140 30C05150 30C05160 30C05170 30C05180 30C05190 30C05210 30C05220 30C05230 30C05230 30C05250 30C05250 30C05260 30C05270 30C05280 30C05290 30C05310 30C05310 30C05310 30C05310 30C05340 30C05350 30C05360 30C05370 30C05380 30C05390 30C05390 30C05400 30C05420 30C05420 30C05420
0780 0782 0783 0784 0785 0787 0788 0786 0780 0792 0793 0794 0798	01 0 0 0 01 01 0 0 0 0 0 0 0 0 0 0 0 0	440008AD E401 408D 6202 6E0006C8 440008F7 44000946 AC00 62FF 6A3A 6C000ACB 658007CA 6908 4400093A 1810 66005000 44000919 65000000 668007CA C4000BEE	* ***** * **** * THI * PUN * TST8 * TO8E * TO8F	***** S TES CH WI BSI BSI BSI CH STX BSI LDX STX STX LDX STX LDX STX LDX LDX LDX LDX LDX LDX LDX L	2 L2 L1 L1 L2 L L1 L2 L	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACOO -1 TEMP8 LOOP SHIFT TO8X1+1 STOP 16 /5000 SKIP *-* SHIFT WAS	INE 8 EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMP8 TO ALL BITS SET LOOP ADORS LD SHIFT FACTOR STO XR1 STOP THE PRINTER SET SKIP TO SW SET BUSY DSW S/B RESTORE XR1 LD DSW	30C05140 30C05150 30C05160 30C05160 30C05170 30C05180 30C05200 30C05220 30C05220 30C05220 30C05250 30C05250 30C05270 30C05270 30C05270 30C05270 30C05300 30C05310 30C05310 30C05310 30C05310 30C05310 30C05310 30C05340 30C05340 30C05340 30C05340 30C05340 30C05400 30C05400 30C05410 30C05420 30C05440 30C05450
0780 0782 0783 0784 0785 0787 0788 078C 078D 0792 0793 0792 0793 0796 0798	01 0 0 0 01 01 0 0 0 01 0 0 0 01 0	440008AD E401 408D 6202 6E0006C8 440008F7 44000946 AC00 62FF 6A3A 6C000ACB 658007CA 6908 4400093A 1810 66005000 44000919 65000000 668007CA C4000BEE	* ***** * **** * THI * PUN * TST8 * TO8E * TO8F	BSI BSI BSI BSI LDX STX BSI LDX STX BSI LDX STX LDX STX LDX STX LDX	2 L2 L1 L1 L2 L L1 L2 L2 L1 L1 L2 L1 L2 L1 L1 L1 L2 L1 L1 L1 L1 L2 L1	TEST ROUT ********** HECKS THAT GENERATE A INTLZ /E401 IN89A 2 LPCNT SPACE PMSG /ACOO -1 TEMP8 LOOP SHIFT TO8X1+1 STOP 16 /5000 SKIP *-* SHIFT HAS	INE 8 EACH CHANNEL SKIP INTERRUPT. INITIALIZE SET TEMP8 TO ALL BITS SET LOOP ADORS LD SHIFT FACTOR STO XR1 STOP THE PRINTER SET SKIP TO SW SET BUSY DSW S/B RESTORE XR1 LD DSW	30C05140 30C05150 30C05160 30C05170 30C05180 30C05190 30C05210 30C05220 30C05230 30C05230 30C05250 30C05250 30C05260 30C05270 30C05280 30C05290 30C05310 30C05310 30C05310 30C05310 30C05340 30C05350 30C05360 30C05370 30C05380 30C05390 30C05390 30C05400 30C05420 30C05420 30C05420

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1132 PRINTER FUNCTION TEST

PROG ID 030C-2

1132 PRINTER FUNCTION TEST

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07A1 0	6308	LDX	. 3	8		30C05470	
07A2 0	1340	SLC		Ō	IDENTIFY CODE	30005480	
07A3 O	LOAO	SLT		32		300,05490	
07A4 01	C70007BE	LD	L3	CH12S-1	LD SEQUENCE FOR THIS CHAN	30005500	
07A6 0	1ACO	RTE		0 –		30005510	
07A7 01	EF0007BE	OR	L3	CH125-1		30005520	
07A9 0	1900	RTE	1	0	RTE BY SHIFT FACTOR	30C05530	
07 AA O	1280	SLT	2	0	CK FOR PROPER SEQ	30C05540	
07AB 0	E01C	AND	ı	TEMP8	CK FOR PROPER SEQ	30C05550	
07 AC 01	44180A6D	B S I	L	ERR13.+-	- BR IF SEQ ERR	30C05560	
OTAE O	D019	STO		TEMP8	A STATE OF THE STA	30C05570	
		• 2.5	. 4		ભાગમાં વર્ષો હતી. જો તેને કે કહ્યું કે જેવા છે. માસ્ક્રેસ્ટ લોકો કે જો હોય છે. જો તેને જો	30005580	
07 AF 01	C4000BEE	LD	L	WAS	STAR LD. DSW	30C05590	
07B1 0	1008	SLA		8		30005600	
07B2 0	401 B	BSI		CHMSG	MSG- CHANNEL X	30005610	
07B3 O	8500	· DC		/8500		30005620	
0784 01	6580079B	LOX	. 11	T08X1+1		30C05630	
		•			•	30005640	
07B6 0	71FF	MDX	1	-1		30005650	
07B7 O	70DA	MDX		TO8F		30C05660	
	* * * · · ·	★ 1.5 %				30005670	
	440009EF	BSI			CK FOR LOCK ON FUNCTION		
	74FF06C8	MDX				30005690	
07BC 0	70D3	MDX		TOBE	BR IF NOT FINISHED	30005700	
		* ***				30005710	
07BC 01	44000600	BSI	L	CNTRL		30005720	
		•				30005730	
		*				30005740	
				CHANNEL	SEQUENCE TABLE	30C05750	
		*				30005760	
		# DE DE				30005770	
07BF 0	0000	CH12S DC		*-*		30005780	
0700 0	0000	CH9SQ DC		*-*		30005790	
0761 0	0000	CH6SQ DC		*-*		30005810	
OI CE U	0000	CHSSQ DC		*-*		30C05800 30C05810 30C05820 30C05830 30C05840	
07C3 0	0000	CH3SQ DC		*-*		30005830	
07C5 0	0000	CH2SQ DC		*-*		30005840	
0766 0	0000	CHISQ DC		*-*		30005850	
07C6 U	0000	SEQSW DC		*-*	SEQ SW	30C05860	
07C8 0	0000	TEMPS DC		4-4	354 3m	30005870	
0769 0	0000	DC		*-*		30005880	
07CA 0	0000	SHIFT DC		*-*		30005890	
07CB 0	0000	SHFT2 DC				30005900	
07CC 0	0000	L TSEQ DC		*-*		30005910	
07CD 0	0000	VCHNL DC		4-4	BIT SET FOR EACH CHAN DET		
5.55 5	5000	*			or or ton their order of	30005930	
		*				30005940	
				PRINT C	ANNEL MESSAGE	30005950	
		ŧ				30C05960	
						30005970	
O7CE O	0000	CHMSG DC		*-*		30C05980	
	4C1807EB	BSC	L			30C05990	
07D1 0	DOF7	STO		TEMP8+1	SAVE CHANNEL CODE	30006000	
07D2 0	6107	LDX		7		30006010	
07D3 0	1140	SLC		0	IDENTIFY BIT	30006020	
07D4 0	1001	SLA		1		30006030	
	4C200A76	BSC		_	ERR IF MORE THAN 1 BIT	30C06040	
		•	-			30006050	
07D7 0	COEF	LD		SEQSW	LD SEQ SM	30006060	
07D8 01	ED00078F	OR		CH12S		30006070	
07DA 01	D50007BF	STO		CH12S		30006080	
07DC 0	DOEF	STO		LTSEQ		30006090	
07DD 0	COE9	LD		SEQSM	LD SEQ SW	30C06100	
07DE 0	1801	SRA		1	ADV SEQ	30006110	
07DF 0	DOE7	STO	1	SEQSM		30C06120	
		•, •				30006130	
07E0 01	C 50007EF	LD	LI	CHTBL	LD MSG	30006140	
04.75	03 1444	O I M A V & &	014	UL66 15	5NDV66 03.1PR67	PROG ID	0300
DATE	02JAN66	01MAY66 415490B			19643 419643D	PAGE .	
EC NO.	415490	4124400	413	7706 4	17073 7170730	FAUL .	

1000							
07E2 01	D4000E57		STO	L	PMG26		30C06150
	C48007CE		LD	ī	CHMSG		30006160
07E6 0			STO	•	CHM1		30006170
* 1 * 1 * 1 * 1	44000946		BSI	L		PRINT 1132 MSG	30C06180
07E9 0		CHM1	DC	_	*-*	MSG CONTROL	30006190
0. 0, 0		*					30006200
07EA 0	CODE	Tr. A.	LD		TEMP8+1		30C06210
	740107CE	CHM2	MDX	L	CHMSG . 1		30006220
The second second	4C8007CE		BSC	Ī	CHMSG		30C06230
		•					30006240
07EF 0	F1F2	C HT BL	DC		/F1F2	12	30C06250
07F0 0	F900		DC		/F900	9	30C06260
07F1 0	F600		DC		/F600	6	30C06270
07F2 0	F500		DC		/F500	5	30C06280
07F3 0			DC		/F400		30006290
07F4 0	F 300		DC		/F 300	3	30006300
07F5 0			DC		/F 200	2	30006310
07F6 0	F100		DC		/F 100	1	30006320
							30006330
			****	***		*******	30C06340 30C06350
		*			TEST ROUT	INC	30C06360
							30C06370
						CIP TO EACH CHANNEL IN CHANNEL ONE PRINTER IS	30C06380
						OPERATION.	30C06390
		* UF	F DUN	1 110	THE SKIP	UPERATION.	30C06400
		•					30C06410
0757 01	440008AD	T ST 9	BSI	L	INTLZ	GO INITIALIZE ROUTINE	30C06420
07F9 0	2020	1,31,7	DC	•	/202D	MSG CONTROL	30C06430
07FA 0	202D		DC		/2020	MSG CONTROL	30C06440
	44000711		BSI	L	IN89A		30C06450
0	. 11000122			_			30006460
07ED 01	C4000984		LD	L	K8000		30006470
07FF 0	DOC8		STO	_	TEMPS		30C06480
		•	7 7 7			19 K 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	30C06490
0800 01	6COOOACB		STX	L	LOOP	SET LOOP ADDRS	30C06500
0802 01	440008F7	T 09 A	BSI	L	SPACE		30C06510
08 04 01	C40005E1		LD	L	SW2	LD SELECT CHANNEL SWS	30C06520
0806 0	1008		SLA		8		30C06530
0807 01	4C20080D		BSC	L	TO9B,Z	BR IF SW ENTRY	30C06540
A 1449		•					30C06550
0809 0	COBE		LD		TEMPB	LD SKIP SEQ SH	30C06560
08 0A 0	EOC2		AND		VCHNL	CHECK FOR VALID CHNL	30006570
0808 01	4C18081D	_	BSC	L	T09C,←		30006580
		*			CHICC	HCC CHIR TO Y	30006590
0800 0	40C0	T 09 B	BSI		CHMSG	MSG- SKIP TO X	30006600
080E 0	AD00		DC .		/ADOO	MSG CONTROL	30C06610 30C06620
03 OF 01	4400093A	•	BSI	L	STOP	STOP THE PRINTER	30C06630
0011 0	COR7	•	10		TEMP8+1	LD SKIP SEQ SW	30C06640
0811 0	COB7 66005000		LDX LD	12	/5000	SET BUSY DSW S/B	30C06650
	44000919		BŞI	L	SKIP	J. 1 2 J. 1 D JR 3/ U	30C06660
OD 1 7 . UI	. ++0000717		n á i	-	J. 1		30006670
							30006680
0814 01	C4000BEE	-	LD	L	WAS	LD DSW	30006690
0818 0	1008		SLA	-	8	LOOK AT CHANNEL BITS	30C06700
0819 0	4084		BSI		CHMSG	MSG- CHANNEL X	30006710
081A 0			DC		/8500	MSG CONTROL	30006720
	440009EF		BSI	L	LOCK	CK FOR LOCK ON FUNCTION	30C06730
					'		30C06740
08 1D 0	COAA	T 09 C	LD		TEMP8	LD SKIP SEQ SW	30C06750
081E 0	1801		SRA		1	SHIFT FOR NEXT CHANNEL	30C06760
081F 0	DOAB		STO		TEMP8		30C06770
0820 0	1808		SRA		8	•	30C06780
	4C200802		BSC		T09A,Z	LOOP IF NOT ZERO	30C06790
0823 01	44000600		BSI	L	CNTRL		30C06800
		*					30C06810
	4 4 4 5	* ** **	****	***	******	******	30C06820
	•						

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					TEST F	ROUTINE	\	***** EL IN INTER IS	30006830	
		****	****	***	*****	******	********	****	30006840	
		* TH	IS RO	UTI	NE WILL	SKIP TO	DEACH CHANN	EL IN	30C06850	
		* OR	DER.	STAF	RTING N	ITH CHA	NNEL ONE. PR	INTER IS	30006860	
		* ON	DURI	NG 1	THE SKI	P OPERA	TION.		30C06870	
		*					TION.		30006880	
									30C06890	
0825 01	440008AD			L	INTLZ	GD	INITIALIZE	ROUTINE	30C06900	
	102E		DC		/102E	MS	CONTROL		30006910	
	44000711		BSI	L	IN89A				30C06920	
		• '		_					30006930	
082A 01	C40009B4		LD	L	K8000			ROUTINE	30006940	
082C 0	D098		STO		TEMP8	s tage			30006950	
									30006960	
08 2 C 01	6COOOACB		STX	L	LOOP	SE	T LOOP ADDRS	1	30C06970	•
082F 01	440008F7	TOAA	BSI	L	SPACE				30006980	
0831 01	C40005E1		LD	L	SW2	LD	SELECT CHAN	NEL SWS	30006990	
0833 0	1008 14C20083A		SLA		8				30007000	
08 34 01	4C20083A	and the second	BSC	L	TOAB,	Z BR	IF SW ENTRY	1	30007010	
									30007020	
0836 0	C091 E095		LD	4 , 1	TEMPB	LD	SKIP SEQ SW ECK FOR VALI		30C07030 30C07040	
0837 0	E095		AND		VCHNL	CH	ECK FOR VALI	D CHNL		
0838 01	4C180853		BSC	r L	TOAC,	-			30007050	
									30007060	
083A 0		TOAB	BSI		CHMSG	MS	G- SKIP TO X	Associated as	30007070	
083B 0			DC		ADOU	M S	G CONTROL		30C07080 30C07090	
		● (4) 0								
0830 0	6101		LUX		1 /8200				30C07100 30C07110	
	66008200		LUX	ĽZ	78200	co	START THE P	DINTED	30C07120	
08 3 F U	440008D1	•	D 2 I	L	IDLE	GU	SIAKI INC P	KINICK	30C07120	
0041.00					1000	ÇE.	T IDLET TO K	EED	30C07140	
	6D000BFD		STY	11	IDICT	פ	T IDLCT TO K RINTER GOING		30007150	
0043 01	COOODFD	•	, 3 . ^		IDEC.	•	AINTEN OUTIO	•	30007160	
0845 0	L C40007C9	T 11.5	I D		TEMPA	1 10	SKIP SEG SM	·	30C07150 30C07160 30C07170	
			LDX	1.2	/5200	SE	T BUSY DSW S	/B	30007180	
		4.4	BSI	ī	SKIP				30C07190	
			* -						30007200	
0848 01	C4000BEE		LD	L	WAS	LD	DSW		30C07210	
	1008	4	SLA	_	8	LO	DK AT CHANNE	L BITS	30C07220	
	440007CE		BSI	L	CHMSG	MS	G- CHANNEL X		30007230	
	8500		DC		/8500	" MS	G CONTROL	L BITS	30007240	
0851 01	440009EF	A	BSI	L	LOCK	CK	FOR LOCK ON	FUNCTION	30007250	
		*							30C07260	
0853 0	L C40007C8	TOAC	LD	L	TEMPB	LD	SKIP SEG SW	CHANNEL	30007270	
0855 0			SRA		1	SH	IFT FOR NEXT	CHANNEL	30007280	
0856 01	D40007C8		STO	L	TEMP8			4.00	300,01230	
0858 0	1808 4C20082F		SRA		8			RO :	30007300	
0859 01	4C20082F		BSC	L		Z LO	OP IF NOT ZE	RO		
085B 01	44000600	_	BSI	L	CNTRL				30007320	
		*							30007330	
		****	****	****		_	**********	****	30007340	
*.	grand and the	*				ROUTINE	D \$*** **** ***		30007350	
	The second second						SWITCH CONT		30C07360 30C07370	
							TO BE PRINT		30C07310	
							INTED ON EAC		30007390	
	EVERT TEST						E ENTERED IN		30C074C0	
		• • •					D IN SWITCHE		30C07410	
3 - 9 5 - 3	0030						SWITCH O IS		30C07420	
	44888899	*							30C07430	
3 . 3 . 6	1010	*	9500		S. C. V	ČV.		778	30C07440	
	440008AD	TSTB		L			INITIALIZE		30007450	
085F 0	25 2 19 2		DC	- 7	/0000		1 6 1 6 1 6 1 6 1		30C07460	•
	and a second second	•	ON.						30C07470	
0860 00	44800163		BSI	I	LOG		INT SET UP M		30007480	
3862 1	OBAB		DC	1	SETUP	100	Profession and Foot	Franklik Erskrich	30007490	
2008	1010	•	FT 2.						30C07500	
4,845,40	1340		11 08	- 1		\$ 61.5	医大脑管膜 人名特雷		FOCERS RO	
	* 30 S		516126				0.24.50 / 3		70000	0305-3
DATE	02JAN66	OIMAY			UL 66	15NOV66	03APR67		PROG ID Page	030C-2 6
EC NO.	415490	41549	סטי	413	490C	419643	419643D		FAUE	

0863	0	083C	TOPA	XIO		RBSWS	READ THE BIT SWS	30C07510	
0864	0	CO3F		LD		BSWS		30C07520	
0865	01	4C28086D		BSC	L	TOBB,+Z	USE SWS IF SW ZERO ON	30C07530	_
								30C07540	
		67000863		LDX		TOBA	LOOP UNTIL SW ZERO ON	30C07550	
0869	01	6F0005E6		STX	L3	MLSCF+1		30C07560	
0868	01	4C000B10		BSC	L	HATT4		30C07570	
			•	Programme and the second				30C07580	
086D	0	1001	TOBB	SLA		1	REMOVE SW ZERO	30C07590	
086E	0	1801		SRA		1		30C07600	
08 6F	0	1888	1.4	SRT		8	PUT 8-15 IN EXT	30007610	
0870	0	D034		STO		PCOLM	STO COLUMN NO. SWS 1-7	30007620	
0871	0 -	1869		SRT		8		30007630	
0872	0	1098		SLT		24		30007640	
0873	0	D035		STO		CHID	STO CHAR ID	30007650	_
0874	01	4C18089A		BSC	L	TOBF . +-	BYPASS PRINT UNLESS A	30007660	
			*				VALID CHARACTER ID	30007670	
								30C07680	
08 76	01	6COOUACB		STX	, L	LOOP	SET LOOP ADDRS	30007690	
0878	0	6132		LDX	1	50	SET EMIT LOOP CNT	30007700	
0879	01	6D0006C8		STX	LI	LPCNT		30007710	
		and the second						30007720	
08 7 B	00	66008200	TOBC	LDX	L2	/8200	SET DSM S/B	30C07730	
08 7 D	0	6101		LDX	1	1	SET IDLE CNT	30C 07740	
087E	01	440008D1		128	L	IDLE		30007750	
								30C07760	
0880	01	C4000C0A	T OB D	LD	L	ENIT	CHECK IF CHARACTER IS	30007770	
0882	0	9026		S		CHID	TO BE PRINTED	30C07780	
		4C18088C		BSC	L	TOBE . +-	YES IF BRANCH	30007790	
			*					30007800	
0885	01	74FFOBLA		MDX	L	ICNT1	SKIP IF INTRPT CNT=1	30007810	
0887		700B		MDX		TOBA	BR IF MISSED AN EMIT	30007820	
0888		74FF06C8		MDX	L	LPCNT1	LOOP FOR 50 SEQUENTIAL	30C07830	
08 8 A		70FU		MDX		TOBC	EMITS	30C07840	
08.88		700E		MDX	4.	TOBF	SPACE IF NO MATCH	30007850	
	7					. 1 7 î		30007860	
08 8 C	0	C018	TOBE	LD		PCOLM	LD COL NO.	30007870	
08 A D		1890		SRT		16		30007880	
08 8 E		A817		D		X16		30C07890	
	-	DC0008A2		STD	L	TEMPB		30C07900	
		658008A3		LDX	- 11	TEMPB+1	XR1=BUF WORD BIT POSITION	30007910	
		668008A2		LDX	12	TEMPB	XR2=BUF WORD NUMBER	30007920	
								30C07930	
0895	01	C40009B4	•	LD	L	K8000		30007940	
0897		1900		SRA	1	0		30007950	
0898	-	EA20		OR	2	32		30007960	
0899		D220		STO		32	SET BIT IN BUFFER	30007970	
	_			7				30007980	
08 9 A	0	6101	TOBF	LDX	1	1	SET SCAN CHT	30007990	
		440008C6	1.77	BSI	L	PRINT	and the second second second second	30008000	
		440009EF		BSI	Ĺ	LOCK	CK FOR LOCK ON FUNCTION	30008010	
				:		.7574		30008020	
08 9 F	0	70C3		MDX		TOBA		30008030	
	•	,,,,,				e ·		30008040	
08 AO		0000		BSS	E	0		30C08050	
08 AO	1	08A4	RESWS		_	BSWS		30008060	
08A1		3A00		DC		/3A00	IOCC TO READ BIT SWS	30008070	
08 A 2		0000	T EMPB			*-*	44	30008080	
08 A 3		0000	•	DC		4-4		30008090	
08 A4		0000	BSWS	DC		*-*		30008100	
08 A 5		0000	PCOLM			4-4	PRINT COL STORED HERE	30008110	
08 A6		0010	X 16	DC		16	our diener mene	30008120	
08 A 7		0030	K 00 30			/0030		30008130	
8 A 80		0002	SETUP			2		30C08140	
08 A 9		0000	CHID	DC		\$ <u>1</u> \$ 0 %		30008150	
.08.AA		.0000	*	DC		0		30C08160	
08 A B	C 3 -	OD88	0.894	DC		AB SW		30008170	
08 AC		0000		OC	į	6	(1985년 18일 전 18일	30008180	
	<u></u>	. 7 7 7				0			

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IBH MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

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	•				30C08190	
	******	**	******	*********	30C08200	
	•		INITIA	LIZE SUBROUTINE	30C08210	
_	******	***	******	*******	30C08220	
	*				30008239	
0000 0 DA80	INTLZ DC		*-*	en e	30008240	
8AE 01 4400093A		L	STOP	STOP THE PRINTER	30C08250	
01 01 010 011 35 A	\$	_	J. 0.		30C08260	
990 01 44000094	-		CLEAD	SET PRINT BUF TO ZERO	30C08270	
880 01 440009BA		L	CLEAR			
882 01 D4000ACB	STO) L	LOOP	RESET LOOP ADDRS	30008280	
	•				30008290	
B4 01 44000B39	BSI	L	READY	CK FOR READY	30C08300	
	•			*	30C08310	
B6 0 4040	851	1	SPACE		30C08320	
B7 0 403F	BSI		SPACE		30C08330	
51 0 4051	*	•	31 402		30C08340	
00 01 6/000040	•	٠.		AD MCC CONTROL		
B8 01 C48008AD	. LD		INTLZ	LD MSG CONTROL	30008350	
BA 01 4C1808C2	BSC	; L	INT2,4	- BR IF MSG CONTROL=ZERO	30008360	
	*				30008370	
BC 0 D002	STO)	INTl	SET CONTROL	30C08380	
BD 01 44000946	BSI			PRINT 1132 MSG	30008390	
BF 0 0000	INT 1 DC	_	*-*	MSG CONTROL	30C08400	
J. 0 0000	A STATE OF		• •		30C08410	
50.0.4034	•	,	CDACE			
CO 0 4036	BSI		SPACE		30008420	
C1 0 4035	BSI	Į	SPACE		30008430	
	*				30C08440	
C2 01 740108AD	INT2 MD	L	INTLZ,		30C08450	
C4 01 4C8008AD	BSC	: 1	INTLZ	RETURN	30C08460	
	a				30C08470	
	-	***	****	******	30C08480	
*	*******	. + + + +				
				SUBROUTINE	30008490	
	****	***	******	******	30C08500	
	*				30C0851 0	
C6 0 0000	PRINT DC		*-*		30C08520	
C7 01 C40005E2	LD	L	SW3		30008530	
C9 01 D4000BFD	STO		IDLCT	SET FOR PRINT	30C08540	
B 00 66008200	LDX		/8200	SET FOR PRINT DSW	30C08550	
			PRCOM	SETTOR PRANT DSW	30C08560	
CD 0 400A	BSI					
CE 0 4028	851		SPACE		30008570	
CF 01 4C8008C6	850	. 1	PRINT		30C08580	
	*				30C08590	
	*****	***	*****	*********	30008600	
•	*		IDLE S	UBROUTINE	30C08610	
	*****	***		*********	30008620	
	\$		2		30008630	
D1 0 0000	IDLE DC		*-*		30C08640	
				SET IDLE CNT	30C08650	
02 01 6D000BFD	ST		IDLCT	SEI IULE CHI		
04 0 6100	LD		0	19 19 19 19 19 19 19 19 19 19 19 19 19 1	30008660	
5 0 4002	BSI		PRCOM		30C08670	
6 01 4C8008D1	BSC	. 1	IDLE	And the second second	30008680	
			y =-		30008690	
					30C08700	
	\$		PRINT	COMMON	30C08710	
	•		LKINI			
	*				30008720	
					30C08730	
D8 0 0000	PRCOM DC		\$-\$		30008740	
D9 01 6D0GGBF0	ST	L L 1	SCNCT	SET SCNCT FOR IDLE	30008750	
DB 01 6E000BFA	ST		EXPCT		30008760	
JU UL ULUUUDI M					30008770	
	-		CENCE	CENCE DEM	30008780	
DD 01 0C000B1A	PRC1 XIC		SENSE-			
DF 01 D4000ADD	STO		DSMM	STO IN MSG	30008790	
E1 0 1003	. SLA	١	3	The way to the second of the s	30C08800	
E2 01 4C1008E7	850	L	PRC2	BR IF CARG NOT BUSY	30C08810	
E4 01 44000A92	BSI		-	PRINT ERR MSG	30008820	
6 0 70F6	MDX		PRC1		30C08830	
LU U TUFU	±	•			30C08840	
	-		E00#6			
	PRC2 BS1		FORMS		30008850	
			APRT		30C08860	
	LD	LZ	MINI		•	
	FD	LZ	AFRI		•	
	LD	LZ	AFRI		2000000	
BE9 01 66000D5E	LD)		UL 66	15NOV66 03APR67	PRUG ID	030
8E7 01 44000B53 8E9 01 66000D5E ATE 02JAN66 C ND. 415490		01J		15NDV66 03APR67 419643 419643D		030

11 32 PR	INTER FUNCTION	ON TEST	Γ.			And the second s	
						CCT + 4 CT OD CH	20000070
	6E000AD0		STX		OPSW	SET LAST OP SW	30C08870 30C08880
	67000200				/0200	BUSY DSW S/B	30008890
	6F000B1C				TBDSW	SAVE BUSY DSW S/B Start the printer	30C08900
	00000982			L		WALT FOR INTERRUPT	30008910
	44000AE6		BSI BSC	L	WAIT PRCOM	WALI FOR INTERROFT	30008920
0812 01	4C8008D8	*	DSC	4.	PREUM		30008930
			****	* **	******	******	30C08940
	A CONTRACTOR OF THE SECOND	*			SPACE SUB		30C08950
		*****	***	* **		******	30008960
							30008970
08F7 0	0000	SPACE	DC		*-*		30008980
08F8 0	4041		BSI		STOP	STOP THE PRINTER	30008990
08F9 01	C4000AE6		LD	L	WAJT		30C09000
08F8 01	4C180909		BSC	L	SPC1.+-	BR ON FIRST SPACE	30C09010
08FD 0	6116		LDX-	1	/16	ERROR NUMBER	30009020
08FE 01	OCOO0B1A		XIO	L	SENSE-1	SENSE DSM	30009030
0900 01	D4000AE4	14	STO	L	CHWAS+1		30009040
	F4000AE3		EOR	L	CHWAS	CHECK FOR CHANGE	30009050
0904 0	1008		SLA		8	IN CHANNEL BITS	30009060
	44200A8B		BSI	L	ERR16,Z	ERROR IF CHANGE	30009070
0907 01	440 00853		BSI	L	FORMS	•	30009080
		*			42000		30009090
	66002000	SPC 1			/2000	SET EXPCI FOR SPACE	30C09100 30C09110
	6E000BFB		STX		EXPCT+1	SET EXPCT FUR SPACE	30C09120
	66000D54		LDX		ASPC OPSW	SET LAST OP SW	30C09120
	6E000AD0 0C000BF4		XTZ	L	STSPA-1	START SPACE	30009140
	C40009B9		LD	Ĺ	K1000	LD CARRIAGE BUSY BIT	30C09150
	44000AE6		BSI	Ĺ	WAIT	WAIT FOR INTERRUPT	30009160
0915 01	THOUGHED	*	551	-	,	ang tron systematic	30C09170
0917 01	4C8008F7	-	BSC	I	SPACE	RETURN	30C09180
0,1,01		*					30009190
		****	****	***	*******	******	30C09200
		****	****	***	******** SKIP	*******	30C09200 30C09210
		*			SKIP	*******	30C09210 30C09220
		*			SKIP ********		30C09210 30C09220 30C09230
0919 0	0000	*	**** DC		SKIP *********	*******	30C09210 30C09220 30C09230 30C09240
091A 0	D010	* ******	**** DC STO	* ** !	SKIP ********** *-* SKPTO	SET CHANNEL CODE IN SKPTO	30C09210 30C09220 30C09230 30C09240 30C09250
091A 0 091B 01	D01D 6E000BFB	* ******	DC STO STX	+ ++:	SKIP ********** *-* SKPTO EXPCT+1	*******	30C09210 30C09220 30C09230 30C09240 30C09250 30C09260
091A 0 091B 01 091D 01	D01D 6E000BFB 44000B53	* ******	DC STO STX BSI	+ ++:	SKIP *************** *-* SKPTO EXPCT+1 FORMS	SET CHANNEL CODE IN SKPTO	30C09210 30C09220 30C09230 30C09240 30C09250 30C09260 30C09270
091A 0 091B 01 091D 01 091F 0	D01D 6E000BFB 44000B53 6210	* ******	DC STO STX BSI LDX	+ ++: L2 L	SKIP ************************************	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT	30C09210 30C09220 30C09230 30C09250 30C09250 30C09260 30C09270 30C09280
091A 0 091B 01 091D 01 091F 0 0920 0	D01D 6E000BFB 44000B53 6210 6A18	* ******	DC STO STX BSI LDX STX	L2 L 2	SKIP ************************************	SET CHANNEL CODE IN SKPTO	30C09210 30C09220 30C09230 30C09240 30C09250 30C09260 30C09270 30C09280 30C09290
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01	D01 D 6E000BFB 44000B53 621 0 6A1 8 C40009B9	* ******	DC STO STX BSI LDX STX LD	L2 L 2 2	*-* *** *** *** *** *** *** ***	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS	30C09210 30C09220 30C09230 30C09240 30C09250 30C09260 30C09270 30C09270 30C09290
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0923 01	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA	* ******	DC STO STX BSI LDX STX LD OR	L2 L 2 2	SKIP *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH	30C09210 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09290 30C09300 30C09310
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0923 01 0925 01	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA	* ******	DC STO STX BSI LDX STX LD OR STO	L2 L 2 L L	SKIP *********** *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON	30C09210 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09290 30C09310 30C09320
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0923 01 0925 01 0927 01	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B	* ******	DC STO STX BSI LDX STX LD OR STO LDX	L2 L 2 L L L	SKIP ********** *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT ASKP	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SM	30C09210 30C09220 30C09230 30C09240 30C09250 30C09260 30C09270 30C09280 30C09290 30C09310 30C09310 30C09330
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0923 01 0925 01 0927 01 0929 01	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0	* ******	DC STO STX BSI LDX STX LD OR STO LDX STX	L2 L 2 2 L L L	SKIP *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT ASKP OP SW	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP	30C09210 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09290 30C09310 30C09320
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0927 01 0929 01 0928 01	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4	* ******	DC STO STX BSI LDX STX LD OR STO LDX STO LDX	L2 L 2 L L L L2 L	SKIP *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT ASKP OP SW STCAR-1	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP	30C09210 30C09220 30C09230 30C09250 30C09250 30C09270 30C09280 30C09290 30C09310 30C09320 30C09330 30C09330
091A 0 091B 01 091D 01 092D 0 0920 0 0921 01 0923 01 0925 01 0927 01 0929 01 0928 01	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000DB 6E000AD0 0C0009B4 C40009B9	* ******	DC STO STX BSI LDX STX LD OR STO LDX STO LDX STX	L2 L 2 L L L L2 L	SKIP *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT ASKP OP SW STCAR-1 K1000	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP	30C09210 30C09220 30C09230 30C09250 30C09260 30C09270 30C09280 30C09290 30C09300 30C09310 30C09320 30C09330 30C09350
091A 0 091B 01 091D 01 092D 0 0920 0 0921 01 0923 01 0925 01 0927 01 0929 01 0928 01	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4	* ******	DC STO STX BSI LDX STX LD OR STO LDX STO LDX STX	L2 L 2 L L L L2 L	SKIP *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT ASKP OP SW STCAR-1 K1000	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT	30C09210 30C09220 30C09230 30C09250 30C09260 30C09270 30C09280 30C09390 30C09310 30C09320 30C09330 30C09350 30C09350 30C09360 30C09370
091A 0 091B 01 091D 01 092D 0 0920 0 0921 01 0923 01 0925 01 0927 01 0929 01 0928 01	D01D 6E000BFB 44000853 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4 C40009B9 44000AE6	# ###### # SKIP	DC STO STX BSI LDX STX LD OR STO LDX STO LDX STX	L2 L 2 L L L L2 L	SKIP *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT ASKP OP SW STCAR-1 K1000	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP	30C09210 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09300 30C09310 30C09320 30C09330 30C09350 30C09350 30C09350 30C09360 30C09370
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0923 01 0925 01 0927 01 0929 01 0928 01 092C 01 092F 01	D01D 6E000BFB 44000853 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4 C40009B9 44000AE6	# ###### # SKIP	DC STO STX BSI LDX STX LD OR LDX STO LDX STX XIO LD BSI	L2 L 2 2 L L L L2 L2 L	SKIP *********** *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT ASKP OPSW STCAR-1 K1000 MAIT STOP	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT	30C09210 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09300 30C09310 30C09320 30C09320 30C09350 30C09350 30C09350 30C09360 30C09370 30C09380 30C09380
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0923 01 0925 01 0927 01 0929 01 0928 01 092C 01 092F 01	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4 C40009B9 44000AE6	* * * * * * * * *	DC STO STX BSI LDX STX LD OR LDX STO LDX STX XIO LD BSI	L2 L 2 2 L L L L2 L2 L	SKIP *********** *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT ASKP OPSW STCAR-1 K1000 MAIT STOP	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL	30C09210 30C09220 30C09220 30C09250 30C09260 30C09270 30C09280 30C09300 30C09310 30C09320 30C09320 30C09350 30C09350 30C09370 30C09370 30C09370 30C09370 30C09390 30C09390
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0925 01 0927 01 0928 01 092C 01 092F 01 0931 0 0932 01 0934 0	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4 C40009B9 44000AE6	* * * * * * * * *	DC STO STX BSI LDX STX LD STO LDX STO LDX STO LDX STO LDX STO LDX STO LDX STO LDX STO LDX STO LDX STO LDX STO STO STO STO STO STO STO STO STO STO	L2 L 2 2 L L2 L L2 L L2	SKIP ***** *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT ASKP OP SW STCAR-1 K1000 MAIT STOP SENSE-1 3 SKIP	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT	30C09210 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09300 30C09310 30C09320 30C09330 30C09350 30C09350 30C09350 30C09360 30C09370 30C09380 30C09380 30C09390 30C09400 30C09410 30C09420
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0925 01 0927 01 0928 01 092C 01 092F 01 0931 0 0932 01 0934 0	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 6E000AD0 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919	* * * * * * * * *	DC STO STX BSI LDX STX LD OR STO LDX STX XIO LD BSI BSI SIA	L2 L 2 2 L L2 L L2 L L2	SKIP *********** *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT ASKP OPSW STCAR-1 K1000 MAIT STOP SENSE-1 3	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL	30C09210 30C09220 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09300 30C09310 30C09310 30C09350 30C09350 30C09350 30C09370 30C09360 30C09370 30C09360 30C09400 30C09410 30C09420 30C09430
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0927 01 0928 01 092C 01 092E 01 0931 0 0931 0 0935 01	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919 70FA	* * * * * * * * * * * * * * * * * * *	DC STO STX BSI LDX STX LD STO LDX STX XIO LDX STX XIO LDX STX XIO LDX STX NDX STX NDX STX NDX STX NDX STX NDX STX NDX STX NDX STX NDX NDX NDX NDX NDX NDX NDX NDX NDX ND	L2 L 2 L L L L2 L L	SKIP ********* *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT ASKP OPSW STCAR-1 K1000 MAIT STOP SENSE-1 3 SKIP SKP1	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL CARRIAGE BUSY GOES OFF	30C09210 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09300 30C09310 30C09320 30C09330 30C09350 30C09350 30C09350 30C09360 30C09370 30C09380 30C09390 30C09400 30C09410 30C09420 30C09440
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0925 01 092F 01 092E 01 092F 01 0931 0 0932 01 0935 01 0937 0	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919 70FA	* * * * * * * * * * * * * * * * * * *	DC STO STX BSI LDX STX LD OR STO LDX STX LD STX LD STX LD STX LD STX LDX LDX LDX LDX LDX LDX LDX LDX LDX LD	L2 L 2 L L L L2 L L	SKIP ************************************	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL CARRIAGE BUSY GOES OFF	30C09210 30C09220 30C09230 30C09240 30C09250 30C09260 30C09270 30C09280 30C09310 30C09310 30C09310 30C09350 30C09350 30C09360 30C09360 30C09360 30C09360 30C09400 30C09400 30C09400 30C09420 30C09450
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0925 01 092F 01 092E 01 092F 01 0931 0 0932 01 0935 01 0937 0	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919 70FA	* * * * * * * * * * * * * * * * * * *	DC STO STX BSI LDX STX LD OR STO LDX STX LD STX LD STX LD STX LD STX LDX LDX LDX LDX LDX LDX LDX LDX LDX LD	L2 L 2 L L L L2 L L	SKIP ********* *-* SKPTO EXPCT+1 FORMS 16 SKCNT K1000 EXPCT EXPCT ASKP OPSW STCAR-1 K1000 MAIT STOP SENSE-1 3 SKIP SKP1	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL CARRIAGE BUSY GOES OFF	30C09210 30C09220 30C09220 30C09250 30C09260 30C09270 30C09280 30C09300 30C09310 30C09320 30C09350 30C09350 30C09360 30C09370 30C09370 30C09360 30C09400 30C09400 30C09400 30C09400 30C09400 30C09400 30C09400 30C09450 30C09460
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0925 01 092F 01 092E 01 092F 01 0931 0 0932 01 0935 01 0937 0	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919 70FA	* * ****** * SKIP * SKP1 * SKPTO SKCNT *	DC STO STX BSI LDX STX LDX STO LDX STO LDX STX LD STO LDX STX LDX STO LDX STX STX LDX STX STX STX STX STX STX STX STX STX ST	+ + + + + + + + + + + + + + + + + + +	SKIP ************************************	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL CARRIAGE BUSY GOES OFF SKIP TO CONTROL SKIP COUNT	30C09210 30C09220 30C09220 30C09240 30C09250 30C09270 30C09270 30C09300 30C09310 30C09320 30C09320 30C09350 30C09350 30C09360 30C09370 30C09380 30C09380 30C09400 30C09400 30C09450 30C09450 30C09450 30C09460 30C09470
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0925 01 092F 01 092E 01 092F 01 0931 0 0932 01 0935 01 0937 0	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919 70FA	* * ****** * SKIP * SKP1 * SKPTO SKCNT * * ******	DC STO STX BSI LDX STX LD STO LDX STO LDX STX LD STO LDX STX LDX STX LDX STO LDX STX LDX LDX LDX STX LDX LDX LDX LDX LDX LDX LDX LDX LDX LD	+ + + + + + + + + + + + + + + + + + +	SKIP ************************************	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL CARRIAGE BUSY GOES OFF SKIP TO CONTROL SKIP COUNT	30C09210 30C09220 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09310 30C09310 30C09320 30C09350 30C09350 30C09360 30C09360 30C09360 30C09400 30C09400 30C09400 30C09400 30C09400 30C09400 30C09400 30C09460 30C09450 30C09460 30C09460 30C09460
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0925 01 092F 01 092E 01 092F 01 0931 0 0932 01 0935 01 0937 0	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919 70FA	* * * * * * * * * * * * * * * * * * *	DC STO STX BSI LDX STX LD STO LDX LDX LDX LDX LDX LDX LDX LDX LDX LDX	L2 L L2 L L2 L L L L L L L L L L L L L	SKIP ************************************	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SM FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL CARRIAGE BUSY GOES OFF SKIP TO CONTROL SKIP COUNT	30C09210 30C09220 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09300 30C09310 30C09320 30C09330 30C09350 30C09350 30C09360 30C09370 30C09360 30C09450 30C09450 30C09450 30C09450 30C09450 30C09450 30C09450 30C09460 30C09470 30C09480 30C09490
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0925 01 092F 01 092E 01 092F 01 0931 0 0932 01 0935 01 0937 0	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919 70FA	* * * * * * * * * * * * * * * * * * *	DC STO STX BSI LDX STX LD STO LDX LDX LDX LDX LDX LDX LDX LDX LDX LDX	L2 L L2 L L2 L L L L L L L L L L L L L	SKIP ************************************	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL CARRIAGE BUSY GOES OFF SKIP TO CONTROL SKIP COUNT	30C09210 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09300 30C09310 30C09310 30C09330 30C09350 30C09360 30C09360 30C09360 30C09400 30C09400 30C09400 30C09450 30C09450 30C09460 30C09460 30C09470 30C09470 30C09480 30C09490 30C09490 30C09490
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0925 01 0926 01 092E 01 092F 01 0931 0 0932 01 0935 01 0937 0	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000D5B 6E000AD0 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919 70FA	* * * * * * * * * * * * * * * * * * *	DC STO STX BSI LDX STX LD STO LDX STO STO STO STO STO STO STO STO STO STO	L2 L L L L L L L L L L L L L L L L L L	SKIP ************************************	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SM FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL CARRIAGE BUSY GOES OFF SKIP TO CONTROL SKIP COUNT	30C09210 30C09220 30C09220 30C09250 30C09250 30C09270 30C09270 30C09300 30C09310 30C09320 30C09320 30C09350 30C09350 30C09370 30C09370 30C09370 30C09400 30C09400 30C09400 30C09470 30C09480 30C09470 30C09480 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0925 01 0927 01 0928 01 092C 01 092F 01 0931 0 0932 01 0935 01 0937 0	D01D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000DB 6E000AD0 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919 70FA	* * * * * * * * * * * * * * * * * * *	DC STO STO STX BSI LDX STX LDX STO LDX STO LDX STO LDX STX DC BSI BSI BSI ABSC MDX DC	L2 L L L L L L L L L L L L L L L L L L	SKIP ************************************	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL CARRIAGE BUSY GOES OFF SKIP TO CONTROL SKIP COUNT	30C09210 30C09220 30C09220 30C09250 30C09250 30C09260 30C09270 30C09290 30C09310 30C09320 30C09320 30C09350 30C09360 30C09360 30C09370 30C09380 30C09480 30C09450 30C09450 30C09450 30C09460 30C09460 30C09470 30C09480 30C09480 30C09500 30C09500
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0927 01 0928 01 092C 01 092F 01 0931 0 0932 01 0935 01 0937 0	DO1D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000DB 6E000ADD 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919 70FA	* * * * * * * * * * * * * * * * * * *	DC STO STO STO STO LDX STO STO LDX STO STO STO STO STO STO STO STO STO STO	L2 L L L L L L L L L L L L L L L L L L	SKIP ************************************	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL CARRIAGE BUSY GOES OFF SKIP TO CONTROL SKIP COUNT ***********************************	30C09210 30C09220 30C09220 30C09250 30C09250 30C09270 30C09270 30C09300 30C09310 30C09320 30C09320 30C09350 30C09350 30C09370 30C09370 30C09370 30C09400 30C09400 30C09400 30C09470 30C09480 30C09470 30C09480 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490 30C09490
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0925 01 0927 01 0928 01 092C 01 092F 01 0931 0 0932 01 0935 01 0937 0	DO1D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000DB 6E000ADD 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919 70FA	* * * * * * * * * * * * * * * * * * *	DC STO STO STX BSI LDX STX LDX STO LDX STO LDX STO LDX STX DC BSI BSI BSI ABSC MDX DC	L2 L L L L L L L L L L L L L L L L L L	SKIP ************************************	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL CARRIAGE BUSY GOES OFF SKIP TO CONTROL SKIP COUNT	30C09210 30C09220 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09310 30C09310 30C09320 30C09350 30C09350 30C09360 30C09360 30C09360 30C09360 30C09400 30C09400 30C09400 30C09470 30C09450 30C09460 30C09470 30C09480 30C09480 30C09480 30C09480 30C09480 30C09490 30C09510 30C09510 30C09520 30C09530
091A 0 091B 01 091D 01 091F 0 0920 0 0921 01 0925 01 0927 01 0928 01 092C 01 092F 01 0931 0 0932 01 0935 01 0937 0	DO1D 6E000BFB 44000B53 6210 6A18 C40009B9 EC000BFA D4000BFA 66000DB 6E000ADD 0C0009B4 C40009B9 44000AE6 4008 0C000B1A 1003 4C900919 70FA	* * * * * * * * * * * * * * * * * * *	DC STO STO STO STO LDX STO STO LDX STO STO STO STO STO STO STO STO STO STO	L2 L L L L L L L L L L L L L L L L L L	SKIP ************************************	SET CHANNEL CODE IN SKPTO SET FOR SKIP INTRPT SET FOR MAX OF 16 SKIPS SET FOR SKIP WITH PRINTER ON SET LAST OP SW FOR SKIP START SKIP LD CARRIAGE BUSY BIT SENSE DSW LOOP HERE UNTIL CARRIAGE BUSY GOES OFF SKIP TO CONTROL SKIP COUNT ***********************************	30C09210 30C09220 30C09220 30C09240 30C09250 30C09260 30C09270 30C09280 30C09310 30C09310 30C09320 30C09350 30C09350 30C09360 30C09360 30C09360 30C09360 30C09400 30C09400 30C09400 30C09470 30C09450 30C09460 30C09470 30C09480 30C09480 30C09480 30C09480 30C09480 30C09490 30C09510 30C09510 30C09520 30C09530

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1132 PRINTER FUNCTION TEST

1132 PRINTER FUNCTION TEST

				-21	• * * * * * * * * * * * * * * * * * * *			*****
093E	01	D4000BF4		STO	L	EMTSM	RESET 1ST EMIT SW	30C09550
0940	01	D4000BFA		STO	L	EXPCT		30C09560
0942	01	D4000B1C		STO	L	TBDSW		30009570
_		4C80093A		BSC	ī	STOP	RETURN	30009580
	••	10000754	•		•	0.0.		30009590

			****	****	* **			30009600
			*				2 MESSAGE SUBROUTINE	30009610
			* ** **	****	***	***** ****	******	30C 096 2 0
								30009630
0946	Λ	0000	PMSG	DC		*-*		30009640
		C40005DF	F 43 G	LD	L	SWO	DO NOT PRINT IF	30C09650
	_				_			
0949	-	100D		SLA		13	BYPASS MESSAGE SWITCH	30009660
094A	01	4C280974		BSC	L	PMS4.+Z	IS ON	30009670
								30C09680
094C	0	4GED		128		STOP		30009690
	-							30009700
094D	0	10A0		SLT		32		30009710
	_	-			1		LD MESSAGE CONTROL	30009720
		C4800946		LD	-		ED HESSAGE CONTROL	
0950		610E		LDX	ı	14		30009730
0951	0	4828		BSC		+ Z	CK FOR EXTENDED TABLE	30009740
0952	0	710F		MDX	1	15		30C09750
0953	0	1001		SLA		1		30009760
0954		D05D		STO		SAVE		30009770
		67000DAE		LDX		BUF.	XR3=BUFFER ADDRS	30009780
					LJ		ARJ-BUTTER ADDRS	30009790
0957	U	7001		MDX		PMS1+1		
			* * * * * * * * * * * * * * * * * * * *					30009800
0958	0	7301	PMS 1	MDX	3	1	PUT SPACE IN MSG	30C09810
0959	0	C058		LD		SAVE	LD MESSAGE CONTROL	30009820
095A		1140		SLCA	1	0	SCAN CONTROL	30009830
		4C180974		BSC	Ľ		BR IF CONTROL ZERO	30009840
				EOR	•	K8000	DR 11 CONTROL ELAD	30009850
095D		F056		-			CAME CONTOCK FOR NET CCAN	
095E	-	D053		STO		SAVE	SAVE CONTROL FOR NXT SCAN	
095F	01	C 5000DCE		LD	Ll	PMTAB	LD MSG ADDRS	30009870
0961	0	D 0 01		STO		*+1		30C09880
			. •					30C09890
0962	00	C4000000	PMS2	LD	L	*-*	LD MSG CHAR	30C09900
0964		F052		EOR	_	TERM	CK FOR TERMINATOR	30009910
	_			BSC	L	-	BR IF TERM	30009920
0702	OI.	4C180958	_	D 3C	_	PMS1.+-	DR IF IERN	
	•		*					30009930
0967	0	F04F		EOR		TERM	RESTORE CHAR	30C09940
0968	0	18C8		RTE		8	SHIFT OUT 2ND CHAR	30009950
0969	0	1008		SLA		8		30009960
096A		0300		STO	3	0	STO CHAR IN BUF	30009970
0,04	•	5500	*	3.0	-	•	0.0 0	30009930
~~	_	1000	_	CIT		14	BRING IN 2ND CHAR	30009990
096B		1090		SLT		16		
		4C180970		BSC	L	PMS3.+-	BR IF ZERO	30C10000
09 6 E	0	7301		MDX	3	1	ADV BUF ADDRS	30010010
09 6 F	0	D300		STO	3	0	STO CHAR IN BUF	30C10020
			*					30C10030
0970	0	7301	PMS3	MDX	3	1		30C10040
		74010963		MDX	L		ADV MSG ADDRS	30C10050
					_	-	ADV 1130 ADDRS	30C10060
0973	U	70EE	_	MDX		PMS2		
					1	3.1		30010070
0974	0	6131	PNS 7	LDX	1	49	LD SCAN CNT	30010080
0975	00	66008200		LDX	L2	/8200	LD EXPECTED INTRPT DSW	30C10090
0977		6310		LDX		16	SET FOR 16 IDLES	30C10100
		6F0008FD		STX	_	IDLCT	BEFORE SPACE	30C10110
				STX	L		SET MSG SW	30C10120
		6C0009B8		-	-			
(B) 7 (UI	44000808		BSI	L	PRCOM	GO PRINT MSG	30010130
0710			•			_		30010140
0710		74010946	PMS5	MDX	L	PMSG, 1	and the second of the second o	30C10150
	01	14010340		BSC	1	PMSG	RETURN	30C10160
097E		4C800946		030				
097E			•	030				30C10170
097E			*		* * *	******	******	
097E			*****		* **		**************************************	30C10180
097E				****		RIPPLE PA	TTERN SUBROUTINE	30C10180 30C10190
097E				****		RIPPLE PA		30C10180 30C10190 30C10200
097E 0980	01	·4C8 00946	*	*****		RIPPLE PA	TTERN SUBROUTINE	30C10180 30C10190 30C10200 30C10210
097E	01			*****		RIPPLE PA	TTERN SUBROUTINE	30C10180 30C10190 30C10200
097E 0980	01	·4C8 00946	*	*****		RIPPLE PA	TTERN SUBROUTINE	30C10180 30C10190 30C10200 30C10210

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415490 4154908 415490C 419643 419643D

0983	n	6132	RIPLI	LDX	1	50	SET EMIT LOOP CNT	30C10230
		6D0006C8		STX	_	LPCNT		30010240
• • • • • • • • • • • • • • • • • • • •	•		• 1					30010250
0986	00	66008200	R IPL2	LDX	L2	/8200	SET DSW S/B	30010260
0988		6101		LDX	1	1	SET IDLE CNT	30C10270
-		440008D1		BSI	L	IDLE		30010280
• • • •								30010290
0988	OΟ	67000000	RIPL3	LDX	L3	*-*	COMPARE START SCAN	30C10300
09 8 D	01	C7COOCEB		LD	L3	CHAR+49	CHAR WITH LAST	30010310
098F	01	94000C0A		S	L	EMIT	EMIT CHAR	30C 10320
0991	01	4C18099B		BSC	L	RIPL4.+-	LOOP IF NOT EQUAL	30C10330
0993	01	74FF081A		MDX	L	ICNT,-1	SKIP IF INTRPT CNT=1	30C10340
0995	0	70ED		MDX		RIPL1		30C10350
			*					30C10360
		74FF06C8		MDX	L	LPCNT1	IF AFTER 50 CONSECUTIVE	30C10370
0998		70ED		MDX		RIPL2	EMITS A MATCH IS NOT	30010380
0999		1810		SRA		16	FOUND, LEAVE SPACE	30C10390
099 🛦	O	7001		MDX		RIPL4+1	THEN CONTINUE	30010400
		1111	*			× 0 0 0 0	SET BUFFER WITH FIRST BIT	30C10410 30C10420
09 9 B		C018	R IPL4			K8000		30C10420 30C10430
0990		61F0		LDX	_	-16	SET SHIFT REGISTER	30C10440
(99D		62F8		LDX		-8	SET STORAGE REGISTER	30010440
099F	-	7301		MDX	9	1		30C10460
099F	_	7005		MDX	•	RIPL5	$(2\mathbf{k}_{i})_{i=1}^{n}($	30C10470
09 A O		63CE		LDX	_	-50	RESET EMIT CHAR CNT	30010470
09 A 1		6BEA		STX	, ,	RIPL3+1	SHIFT LAST LINE	30C10490
09 A 2		1801		SRA		1	IN PATTERN	30010500
09 A 3	-	7101		MDX		2	IN PAITERN	30C10510
09 A 4	U	7302	*	MDX		2 ,		30C10520
00 4 5	^1	6F000BEC	R IPL5	CTV	12	BLANK	SET FOR PATTERN SPACE	30C10530
	-	6D000BD0	KIFES	STX		P15+1	SET TON TATIENT STAGE	30C10540
		6E000BD2		STX		P16+1		30C10550
09AB		6176		LDX		118	SET SCAN COUNT	30C10560
		D4000020		STO	L	32	SET 1ST BUFR WORD	30C10570
		440008C6		BSI	ī	PRINT	GO PRINT	30C10580
		4C800982		BSC	ī	RIPL		30510590
0.00	•	10000702			-			30C10600
09 B 2		0000		BSS	E			30C10610
09 B 2	Ω	0000	SAVE	DC		*-*		30C10620
0983		3480	STPRT	DC		/3480	START PRINTER	30C10630
0984	0	8000	K 80 00	DC		/8000		30C10640
0985	0	3404	STCAR	DC		/3404	START CARRIAGE	30C 10650
0986	0.	FFFF	DNES	DC		/FFFF		30010660
09B7	0	FFFF	TERM	DC		/FFFF	***	30C10670
0788	0	0000	MSGSW	DC		*-*	PRINTER MSG SW	30010680
09B9	0	1000	K 1000	DC		/1000		30010690
			*					30010700
			* ** **	****	* **		******	30010710
			*				FER SUBROUTINE	30010720
								30010730
							IRS 32-39 AND	30010740
				TS BI	1 1	5, LOC 39.		30C10750
			*					30010760
	_		*			<u> </u>		30010770
09 E A		0000	CLEAR		_	0	DO INT AREA	30010780
0988				LDX	3	-8	PRINT AREA	30010790
09 BC		10A0		SLT		32	CLEAD SDACE SH	30C10800 30C10810
		D4000C03	6136	STO		SPCSX	CLEAR SPACE SW	30010820
		DF000028	CLIO			40		30010830
0961		7302 7050	And the first	MDX	. 3	2		30010840
0902		70FC		MDX	•	ČL10	SET SCAN COMP BIT	30C10850
0963		6301 6F000027		LDX		1 39	JLI JUAN CONF DII	30C10860
				STX		MSGSW	RESET MSG SW	30010870
0968		D4000988		STO		-32	near i mag af	30010840
		D7000DCE	CL20			8UF+32		30010890
0909		7301	CLEU	MDX				30010990
	-					신투 전		

DATE 02JAN66 01MAY66 01JUL66 15NOV66 03APR67 EC NO. 22 415490 4154908 415490C 419643 419643D

· 医眼睛 "我想要好到了这些的意思,我们还是想到我们一些说话,我们还没有错。" 医感染 "这时间,这个现在,这个是是一个

PAGE 8A

BUSY DSW ERR

LD ALPHA MSG

GO PRINT MSG

LD ALPHA MSG

RETURN

15NOV66

419643

NO INTRPT

SET DATA CONTROL

SET DATA CONTROL

BR IF SPACE/SKIP

O3APR67

419643D

CK FOR SOME INTRPTS

CK FOR EXPCT SPACE/SKIP

SET MSG NO.

30C11460

30C11470

30C11480

30C11490

30C11500

30C11510 30C11520

30C11530

30C11540

30C11550

30C11560

30C11570

30C11580

PAGE

PROG ID

0300-2

OA 02 0 0000

0A 03 0 6102

OAOC 0 6103

0A 0D 0 6220

0A12 0 7003

DATE

EC NO.

0A 04 00 66000180

0A06 01 CC000A9C

0A08 01 44000ABA

0A0A 01 4C800A02

OA OE O1 CCOOOA9E

0A10 01 74000BFB

0A13 01 74C00B1A

415490

ERR 2

ERR3

01MAY66

415490B

DC

BSC

LDX

LDX

MDX

LDX 1 2

LDX L2 /0180

LDD L MSG2

LDD L MSG3

MDX L ICHT

MDX L EXPCT+1

01JUL66

415490C

BSI L ETYPE

I ERR2

2 /0020

ERR3X

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PART NO. 2191220 PAGE

1132	PRINTER	FUNCTION	TEST
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()

C

MOX								
MAIL O	0A15 0	7004		MDX		ERR4	BR IF SOME	
OA18 01 4C800AE6			*					30C11600
### COLOR CO	OA 16 O1	44000ABA	ERR3X	BSI	L	ETYPE	GO PRINT MSG	
MAIA 0 6 104	OA 18 01	4C800AE6		BSC	I	TIAW	RE TURN	30C11620
DATE			*					30C11630
MAIL 0	OA I A O	6104	ERR4	LDX	1	4	PRINTER STOPPED	30C11640
MAIL O 70F8	OA 1 B O 1	CCOODAAO		LDD	L	MSG4	LD ALPHA MSG	30C11650
CALE 0 0000		-		MDX		ERR3X		30C11660
0A20 00 66000600								30C11670
0A20 00 66000600	OALEO	0000	ERR5	DC		*-*	LEVEL 1 DSW ERR	30C11680
DAZ 0					1	5		30C11690
DAZ2 0 C CBTE								30C11700
DA25 O 1 44000ABA								30C11710
0A25 01 74FF0B1A		and the second second			L			
0A28 0 700A			*					30C11730
0A29 07 07001	0425 01	74FFOBLA		MDX	L	ICNT1	CK FOR MULT INTRPTS	30C11740
DA28 0 700A								30C11750
No.29 Ol C.4000B1D								
DAZE 01 C4000B1D LD L EBITS LD DSW ERROR BITS 30C11790	0.20		*					
DAZE 01 4C2800A5C SSC C ERR9, *Z BR F PRINT RESPONSE ON 30C11890 30A20 1001 SLA 1 30C11800 30A20 1001 SLA 1 30C11800 30A30 1001 SLA 1 30C11810 30A30 30A30 1001 SLA 1 30C11830 30C11830 30A30 30A30 4C2800A1E ERR5X BSC ERR10, *Z BR F SKIP RESPONSE ON 30C11830 30C1830	0429 01	C400081D		· L D	1.	EBITS	LD DSW ERROR BITS	
0A2E 0 1001 0A2E 01 4C280A56 0A2E 01 4C280A56 0A3C 0 1001 0A3O 0 1000 0A3O 0 1								
OA30					_	-		
0A30 0 1001 0A31 01 4C280A51 0A33 01 4C800A1E 0A33 01 4C800A1E 0A35 0 0000 0A35 0 0000 0A36 0 6106 0A37 0 6203 0A37 0 6203 0A38 0 C868 0A39 01 44000ABA 0A38 01 44000ABA 0A39 01 44000ABA 0A39 01 44000ABA 0A36 0 0000 0A39 01 44000ABA 0A37 0 6203 0A38 0 0000 0A39 01 6200A 0A40 0 620A 0A40 0					1	_	BR IF SKIP RESPONSE ON	
OA31 01 4C280A51					_	-		
0A33 01 4C800A1E							AR TE SPACE RESPONSE ON	
0A35 0 1 4C800A1E	0431 01	10200431	•	550	_	CKK 10 Y · L		
	0433 01	ACROOALE	F PP SY	RSC		FRRS	RETIRN	
0A35 0 0000 ERR6 DC	0433 01	TOUUNIL		030	•		inc rount	
0A36 0 6106	0435.0	0000		DC .		*-*	EMIT RIT FAILURE	
0A37 0 6203			EKKU		. 1			
NASS CASE LDD								
0A39 01 44000ABA					_			
0A3B 01 4C800A35								
*** OA 3 C O 0000								
0A3E 0 0000	UM 3 D UI	TCOUCASS	•	D3C	•	CKKO	NC TONIT	
0A3E 0 6107	0430	0000	•	DC .		*-*	EMIT INVALID	
CA3F O 6208			EKKI		,			
0A40 0 C865								
0A41 01 44000ABA					~			
0A43 01 4C800A3D								
# 30C12000 0A45 0 0000								
0A45 0 0000 ERR8 DC #-* EMIT SEQ ERR 30C12010 0A46 0 6108 LDX 1 8 SET MSG NO. 30C12020 0A47 0 6218 LDX 2 /0018 SET DATA CONTROL 30C12030 0A48 0 C85F LDD MSG8 LD ALPHA MSG 30C12040 0A49 0 4070 BSI ETYPE GO PRINT MSG 30C12050 0A4A 01 4C800A45 BSC I ERR8 RETURN 30C12070 0A4C 0 6109 ERR9 LDX 1 9 PRINTER DID NOT TURN OFF 30C12080 0A4D 0 6200 LDX 2 0 SET FOR NO DATA 30C12100 0A4E 0 C85B LDD MSG9 LD ALPHA MSG 30C12110 0A4F 0 406A BSI ETYPE GO PRINT MSG 30C12110 0A50 0 70E2 MDX ERR5X 30C12120 0A51 0 6110 ERR10 LDX 1 /10 MULT SPACE INTRPTS 30C12140 0A52 0 6200 LDX 2 0 SET FOR NO DATA 30C12150 0A53 0 C858 LDD MSG10 LD ALPHA MSG 30C12160 0A54 0 4065 BSI ETYPE GO PRINT MSG 30C12160 0A55 0 70DD MDX ERR5X 0A56 0 6111 ERR11 LDX 1 /11 MULT SKIP INTRPTS 30C12180 0A57 0 6200 LDX 2 0 SET FOR NO DATA 30C12220	UA 43 UI	TCOUCASD		63 C	•	CNNI	KE I ONII	
0A46 0 6108 LDX 1 8 SET MSG NO. 30C12020 0A47 0 6218 LDX 2 /0018 SET DATA CONTROL 30C12030 0A48 0 C85F LDD MSG8 LD ALPHA MSG 30C12040 0A49 0 4070 BSI ETYPE GO PRINT MSG 30C12050 0A4A 01 4C800A45 BSC I ERR8 RETURN 30C12070 0A4C 0 6109 ERR9 LDX 1 9 PRINTER DID NOT TURN OFF 30C12080 30C12070 0A4D 0 6200 LDX 2 0 SET FOR NO DATA 30C12090 30C12100 0A4F 0 406A BSI ETYPE GO PRINT MSG 30C12100 30C12110 0A50 0 70E2 MDX ERR5X 30C12120 0A51 0 6110 ERR10 LDX 1 /10 MULT SPACE INTRPTS 30C12130 30C12120 0A52 0 6200 LDX 2 0 SET FOR NO DATA 30C12150 30C12140 0A53 0 C858 LDD MSG10 LD ALPHA MSG 30C12150 30C12170 0A55 0 70DD MDX ERR5X 30C12180 0A56 0 6111 ERR11 LDX 1 /11 MULT SKIP INTRPTS 30C1210 0A58 0 C855 LDD MSG11 LD ALPHA MSG 30C12210 0A58 0 C855 LDD MSG11 LD ALPHA MSG 30C12220	0445.0	0000		חר		*-*	EMIT SEO ERR	
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0A4E 0 C85B 0A4F 0 406A 0A4F 0 4065 0A4F 0 4060 0A4F 0			CKKY					
0A4F 0 406A 0A50 0 70E2 BSI ETYPE ERF5X GD PRINT MSG 30C12110 30C12120 30C12120 30C12130 0A51 0 6110 ERR10 LDX 1 /10 MULT SPACE INTRPTS 30C12140 0A52 0 6200 LDX 2 0 SET FOR NO DATA 30C12150 0A53 0 C858 LDD MSG10 LD ALPHA MSG 30C12160 0A54 0 4065 BSI ETYPE GD PRINT MSG 30C12170 0A55 0 70DD MDX ERR5X 30C12180 50C12190 0A57 0 6200 LDX 2 0 SET FOR NO DATA 30C12210 0A57 0 6200 LDX 2 0 SET FOR NO DATA 30C12210 0A58 0 C855 LDD MSG11 LD ALPHA MSG 30C12220 0A59 0 4060 BSI ETYPE GD PRINT MSG 30C12220 0A59 0 4060 BSI ETYPE GD PRINT MSG 30C12220 0A59 0 4060 BSI ETYPE GD PRINT MSG 30C12230 0A5A 0 70D8 MDX ERR5X					_	_		
QA50 0 70E2 MDX ERR5X 30C12120 0A51 0 6110 ERR10 LDX 1 /10 MULT SPACE INTRPTS 30C12140 QA52 0 6200 LDX 2 0 SET FOR NO DATA 30C12150 QA53 0 C858 LDD MSG10 LD ALPHA MSG 30C12160 QA54 0 4065 BSI ETYPE GO PRINT MSG 30C12170 QA55 0 70DD MDX ERR5X 30C12180 0A56 0 6111 ERR11 LDX 1 /11 MULT SKIP INTRPTS 30C12200 QA57 0 6200 LDX 2 0 SET FOR NO DATA 30C12210 QA58 0 C855 LDD MSG11 LD ALPHA MSG 30C12220 QA59 0 4060 BSI ETYPE GO PRINT MSG 30C12220 QA5A 0 70D8 MDX ERR5X 30C12240								
0A51 0 6110							OU FRINT HOU	
0A51 0 6110 ERR10 LDX 1 /10 MULT SPACE INTRPTS 30C12140 0A52 0 6200 LDX 2 0 SET FOR NO DATA 30C12150 0A53 0 C858 LDD MSG10 LD ALPHA MSG 30C12160 0A54 0 4065 BSI ETYPE GO PRINT MSG 30C12170 0A55 0 70DD MDX ERR5X 30C12180 0A56 0 6111 ERR11 LDX 1 /11 MULT SKIP INTRPTS 30C12290 0A57 0 6200 LDX 2 0 SET FOR NO DATA 30C12210 0A58 0 C855 LDD MSG11 LD ALPHA MSG 30C12220 0A59 0 4060 BSI ETYPE GO PRINT MSG 30C12220 0A5A 0 70D8 MDX ERR5X 30C12240	UASUU	1062		HUA		EKKOA		
0A52 0 6200 LDX 2 0 SET FOR NO DATA 30C12150 0A53 0 C858 LDD MSG10 LD ALPHA MSG 30C12160 0A54 0 4065 BSI ETYPE GD PRINT MSG 30C12170 0A55 0 70DD MDX ERR5X 30C12180 0A56 0 6111 ERR11 LDX 1 /11 MULT SKIP INTRPTS 30C12200 0A57 0 6200 LDX 2 0 SET FOR NO DATA 30C12210 0A58 0 C855 LDD MSG11 LD ALPHA MSG 30C12220 0A59 0 4060 BSI ETYPE GO PRINT MSG 30C12220 0A5A 0 70D8 MDX ERR5X 30C12250	04.51.0	4110	E 00 10		,	/10	MILL COACE INTOOTS	
0A53 0 C858 LDD MSG10 LD ALPHA MSG 30C12160 0A54 0 4065 BSI ETYPE GD PRINT MSG 30C12170 0A55 0 70DD MDX ERR5X 30C12180 0A56 0 6111 ERR11 LDX 1 /11 MULT SKIP INTRPTS 30C12210 0A57 0 6200 LDX 2 0 SET FOR NO DATA 30C12210 0A58 0 C855 LDD MSG11 LD ALPHA MSG 30C12210 0A59 0 4060 BSI ETYPE GD PRINT MSG 30C12230 0A5A 0 70D8 MDX ERR5X 30C12240 * 30C12250			EKKIU					
0A54 0 4065 0 70DD BSI ETYPE 0ADX ERR5X GD PRINT MSG 30C12170 30C12180 30C12180 30C12190 0A55 0 70DD					~			
OA55 O 70DD								
# 50C12190 0A56 0 6111							GU PRINI H3G	
0A56 0 6111 ERR11 LDX 1 /11 MULT SKIP INTRPTS 30C12200 0A57 0 6200 LDX 2 0 SET FOR NO DATA 30C12210 0A58 0 C855 LDD MSG11 LD ALPHA MSG 30C12220 0A59 0 4060 BSI ETYPE GO PRINT MSG 30C12230 0A5A 0 70D8 MDX ERR5X 30C12240 * 30C12250	UA JO U	7 000	•	ΨUX		ENROA		
0A57 0 6200 LDX 2 0 SET FOR NO DATA 30C12210 0A58 0 C855 LDD MSG11 LD ALPHA MSG 30C12220 0A59 0 4060 BSI ETYPE GO PRINT MSG 30C12230 0A5A 0 70D8 MDX ERR5X 30C12240 * 30C12250	0454 0	4111		LDY		/11	MILL T CKID INTODIC	
0A58 0 C855 LDD MSG11 LD ALPHA MSG 30C12220 0A59 0 4060 BSI ETYPE GO PRINT MSG 30C12230 0A5A 0 70D8 MDX ERR5X 30C12240 * 30C12250			CUVII					
0A59 0 4060 BSI ETYPE GD PRINT MSG 30C12230 0A5A 0 70D8 MDX ERR5X 30C12240 * 30C12250					~			
0A5A 0 70D8 MDX ERR5X 30C12240 # 30C12250								
* 30C12250							OU FRIEI MOU	
	UADAU	1000		UNY		ERROA		
UNDER O DUDO ERRIZ DE 4-4 HIBBING CHANNEL DUCIZZOU	04 5 9 .0	0000	-	סכ		*-*	MISSING CHANNEL	
	UN DO U	0000	E MK 12	UC		****	DISSING CHARMEL	20012200
		•						

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1132 PRINTER FUNCTION TEST

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1132 PRINTER FUNCTION TEST

415490

EC NO.

0456	01	C5000A64		1.0		CHNIM-1		LD CHANNEL NO. SET IN MSG SET MSG NO. SET DATA CONTROL LD ALPHA MSG GO PRINT MSG RETURN CHANNEL SEQ ERR SET MSG NO. SET DATA CONTROL LD ALPHA MSG GO PRINT MSG RETURN MULT CHANNEL BITS LD INVALID CHANNEL CODE LD ALPHA MSG GO PRINT MSG RETURN CHANNEL SENSE ERR SET DATA CONTROL LD INTRPT DSM	30012270	
OA5E		D078		STO		CHANI		CET IN USA	30012270	
OA5F		6112		1 DX		/12		SET MSG NO.	30012200	
0A60		6204		LDY	•	10004		CET DATA CONTROL	30012270	
0461		C84E		LDX	~	7000 4		1D ALDHA MCC	30012300	
0A62		4057		BCI:		ETVEC		CO DRINT MCC	30012310	*
	_	4C800A5B		D21		E117E		DETUDN	30012320	
UA 6 3	O1	4COUUA3D		63 C		CKK12		KETUKN	30012330	
0445	_	0001	C HNUM	20		•			30012340	
0A65			CHNUN	DC	4 T.	1			30012330	
0466		0002		DC		· č			30012300	
0A67		0003		שנ		3			30012370	
0A68		0004		טכ		2			30012300	
0469		0005		DC		?			30012390	
OA 6 A		0006		טכ		0			30012400	
OA 6B		0009		DC		4			30012410	
OA6C	U	000C		שנ		. 12			30012420	
-	_		500.00						30012430	
OA 6D			ERR 13	DC				CHANNEL SEW EKK	30012440	
OA 6E		6113		LUX	ī	/13		SET ASS NU.	30012430	
OA 6F	_	6200		LDA	2	0		SET DATA CUNTKUL	30012400	
0A70		C841		LUU		M3G13		LD ALPHA MSG	30012470	
		4048		B21		ETAPE		GU PRINI MSG	30012480	
		C4000986		LD	L	UNES		Landau Santa de la companya della companya della companya de la companya della co	30012490	
OA 74	01	4C800A6D		BSC	I	ERR13		RETURN	30012500	
	_				_				30012510	•
		6114	ERR14	LDX	1	/14		MULT CHANNEL BITS	30012520	
	_	6220		LDX	. 2	/0020	_		30012530	
		C40007C9		LD	L	TEMP8+	Lin	LD INVALID CHANNEL CODE	30012540	
		1808		SRA		8			30012550	
	-	D061		STO		DZMM		1, 2, 4, 1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,	30012560	
		C837		LDD		MSG14		LD ALPHA MSG	30012570	
		403C	4.5	BSI		ETYPE		GO PRINT MSG	30012580	
OA 7 E	01	4C0007EB		BSC	L	CHM2		RETURN	300.12590	
		*	• •						30012600	
	-	0000	ERR 15	DC		*-*		CHANNEL SENSE ERR	30012610	
				LOX	L2	/0801		SET DATA CONTROL	30012620	
		C4000BEE		LD	L	WAS		LD INTRPT DSW	30012630	
		E05F		AND		KOOFF	1.	MASK ALL BUT CHAN BITS	30012640	
		D051		\$10		ERM4		STO IN MSG	30012650	
		C82E	ERR 16	LDD		MSG15		LD ALPHA MSG	30012660	
		4031		BSI	100	ETYPE		GO PRINT MSG	30012670	
		4C800A80		BSC	I I	ERR15		RETURN	30012680	
		0000	ERR 16	DC		*-*			30012690	
		66001800		LDX	L2	/1800			30012700	
0A 8 E		-,		LDD		MSG15			30012710	
048F				BSI	4	ETYPE			30012720	
OA 90	01	4C800A8B		BSC	· I	ERR16			30012730	
									30012740	
0A92		0000	ERR 17	DC		*-*			30012750	
OA 9 3	-	6117		LDX	1	/17		CHANNEL SENSE ERR SET DATA CONTROL LD INTRPT DSW MASK ALL BUT CHAN BITS STO IN MSG LD ALPHA MSG GO PRINT MSG RETURN	30012760	
OA 94		6220		LDX	2	/0020			30012770	
OA 95		C822		LDD		MSG17			30012780	
UA96		4023		BSI	• •,	ETYPE			30012790	
OA 97	01	4C800A92		BSC	I	ERR17			30C12800	
			*		1 _				30012810	
0A9A		0000		BSS	E	0			30012820	
0A 9 A	-	OCEB	M SG 1	DC		AWAS		WAS S/B	30(12830	
0A 9 B		OCF1		DC		ASDSW		STATIC DSW	30C12840	
OA9C		OCEB	M SG 2	DC		AWAS		WAS S/B	30E12850	
0A 9 E		OCFA		DC		ABDSW		BUSY DSW ERR	30012860	
04 9 E		ODOA	MSG3	DC		ADSW		DSW	30C12870	
OA9F		ODOD		DC		ANINT		NO INTRPT	30C12880	
OAAO		OD14	MSG4			ADPR		DSW PRINTER	30012890	
OA A 1		OD18		DC		ASTPD		STOPPED	30012900	
0A # 2		OCEB	MSG 5	DC	J. 14.3	AWAS		WAS S/B	30012910	
OA A 3		0D02		DC		AD SW1		LEVI DSW ERR	30012920	
OA A4	_	0029	MSG6	DC		AEBF		EMIT BIT FAILURE	30012930	
OA A 5	0	0000		DC		/0000			30C12940	
									*	
							1500	0240047	2000	030C-2
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415490B 415490C 419643

0A A 6	1	0D38	MSG7	DC		AENT PLANT	EMIT INVALD	30C12950
OA A 7	0	0000		DC		/0000		30C12960
8 A AO	1	OCEB	MSGB	DC .		AWAS	WAS S/B	30C12970
OA A 9	1	003F		DC	71.	AE SER	EMIT SEQ ERR	30C12980
OAAA	1	OD17	M SG9	DC	7.5	APRTR	PRINTER	30C12990
OAAB	1	0D20		DC		ADNTO	DID NOT TURN OFF	30013000
OAAC		OD51	M SG10			AM SP	MULT SPACE	30013010
OAAC		OD10		DC		AINT	INTRPT	30013020
OAAE	_	CD58	MSG11			AM SK	HULT SKIP	30013030
OAAF		OD10		DC		AINT	INTRPT	30C13040 30C13050
OABO		0D48	M SG 12			AMC	MISSING CHANNEL	30C13050
OAB1		0000	45613	DC		/0000	CHANNEL	30C13070
OAB2		0D4C	MSG13			ACHAN		30013010
0A B 3		0D43	M SG 14	DC		ASER	SEQ ERR Invald Channel Code	30C13090
OAB4		0D71	H 20 14	DC		/0000	INVALO CIAMILE COSE	30C13100
OA B 5		0000 0D4 C	M SG 15			ACHAN	CHANNEL	30C13110
OAB6 OAB7		0D6B	H 30 17	DC		ASNER	SENSE ERR	30C13120
OAB8		0D0A	MSG17			ADSW	JE113E E1111	30C13130
OAB9		ODA 6	113021	DC		ACBSY		30C13140
UA D 7	•	0000	•					30C13150
			*****	****	***	********	******	30C13160
			*			PRINT ERRO		30C13170
			****	****	***		******	30C13180
								30C13190
OABA	0 :	0000	ETYPE	DC		*-*		30C13200
OABB		6917		STX	1	TABLE	SET ID IN MESSAGE TABLE	30C13210
OABC		6A18		STX	2	TABLE +2	STO DATA WORD CHTRL	30C13220
OABC		D818		STD		ALPHA		30C13230
		4400093A		BSI	Ĺ	STOP	STOP THE PRINTER	3GC 13240
			*					30C13250
OACO	01	74000AC6		MDX	L	OPMSW		30C13260
OAC2	0	7005		MDX		ETYP1		30C13270
OAC3	00	44800162		BSI	ľ	ERROR	PRINT LAST OP	30C13280
OA C5	1	OACC		DC		ETYP2		30013290
OAC6	0	0000	OPHSW			+-+	MUST BE ZERO FOR OP MSG	30C13300
0A C 7	0	68FE		STX		OPMSW		30C13310
			*		_			30C13320
		44800162	ETYP1		I	ERROR		30013330
OACA		OAD3		DC		TABLE	1.000 ON 50000	30013340
OACE	0	0000	LOOP	DC		0	LOOP ON ERROR	30013350
			*			FRUDE	DC 71104	30C13360
		4C8OOABA	ETYP2		I	ETYPE	RETURN	30013370
OACE		8000		DC		/8000		30C13380
OACF		0D7F	0054	DC		ALOP		30C13390 30C13400
OA DO	U	0000	OPSW	DC		+-+	en e	30C13410
								30013420
		10 P	. ED		E 551	GE TABLE		30C13430
			\$					30C13440
								30C13450
OA D2		0001		BSS	E	1		30C13460
OAD3	Ω	0000	TABLE		•	*-*	MESSAGE NUMBER	30C13470
OA D4		0004		DC		/0004	HEX/DECIMAL SW	30C13480
OA D5		0000		DC		+-+	DATA WORD ID	30C13490
OAD6		0000	ALPHA			*	1ST ALPHA MESSAGE ADDRESS	30C13500
OAD7		0000	ERM3	DC		*-*	2ND ALPHA MESSAGE ADDRESS	30C13510
J.,	-		*					30C13520
8 G A O	0	0000	ERM4	DC -		*-*	MODIFIERS	30C13530
OAD9		0000		DC		*-*	And the second second	30C13540
OADA		0000	CHANL			*-*	STORE ERR CHANNEL	30C13550
OADB		0000	EMTWS			*-*	STORE EMIT WAS	30C13560
OADC		0000	E MT SB			*-*	STORE EMIT S/B	30C13570
OADD		0000	DSWW	DC.		*-*	STORE DSW WAS	30C13580
OADE		C000	DSWSB	DC		/0000	STORE DSW S/B	30C13590
OADF		0000	B DS W	DC	(2.11	**	BUSY DSW WAS	30C13600
OA EO	0	0000		DC	100	4-4	BUSY DSW S/B	30013610
OA E 1	0	0000	I DS W	DC		*-*	INTRPT DSW WAS	30C13620

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			0 0		•
BM MAINTENANCE D	IAGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. 2191220 PAGE 11	(- 0	IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. 219122 PAGE 11
132 PRINTER FUNC	TION TEST		(0	1132 PRINTER FUNCTION TEST	
NE2 0 0000	DC +-+ INTRPT DSH S/B	30C13630	(0	0B24 01 44200A1E BSI L ERR5.Z	30C14310
NES 0 0000 NES 0 0000	CHANNEL DSW WAS	30C13640 30C13650	(6	0826 01 C4000C07 LD L CKESW 0828 0 D001 STO #+1	30C14320 30C14330 30C14340
1E5 0 00FF	KOOFF DC /OOFF	30C13660 30C13670	((,	0829 00 44200000 BSI L +-+,Z BR IF ENIT ERR	30C14350
	**********		(5	0828 0 08EE	30C14360 30C14370
	* INTERRUPT WAIT ROUTINE	30C13690 *** 30C13700		082C O EOB8 AND KOOFF MASK ALL BUT CH	AN BITS 30C14380
	•	30013710	t Či	OB 2D O DOB5 STO CHWAS STO IN ERR MSG OB 2E O1 F4000BEE EOR L WAS COMPARE WITH IN	30C14390 TRPT DSW 30C14400
NE6 0 0000 NE7 0 E834	MAIT DC #-# DR TBDSW BUILD BUSY DSW S	30C13720 /B 30C13730	• • •	0B30 0 1002 SLA 2	30C14410
E8 0 DOF7	STO BDSW+1 SET IN S/B	30C13740	1	0831 01 4C100B37 BSC L RTRN1 - BR UNLESS AFTER	SPACE 30C14420 30C14430
E9 01 C4000C03	LD L SPCSX SET SPACE COUNT STO L SPCSW	30C13750 30C13760	1	0833 0 1006 SLA 6 LOOK AT CHANNEL	
AED 0 082C	XIO SENSE-1 SENSE BUSY DSW	30C13770		0B34 0 6115 LDX 1 /15 LD MSG NUMBER	30014450
EE 01 E4000C00	AND L K7F00	30C13780 30C13790		0B35 01 44200AB0 BSI L ERR15,Z BR IF NOT EQUAL	30C14460 30C14470
AFO O DOEE	STO BDSW SAVE BUSY DSW	30C13740		0837 01 4C800AE6 RTRN1 BSC I WAIT	30C14480
F1 0 1010	SLA 16	30C13810	\mathbf{c}	* **********************************	30C14490 **** 30C14500
AF2 0 DOD3 AF3 0 DO26	STO OPMSW STO ICNT RESET ICNT	30C13820 30C13830		* CHECK READY	30C14510
AF4 0 D028	STO EBITS RESET EBITS	30C13840	0 0	**************************************	
AF5 01 D4000C07	STO L CKESW RESET CKESW STO L SPCSX	30C13850 30C13860		* THIS SUBROUTINE CHECKS THE DSW FOR * READY CONDITIONS	30C14530 30C14540
F7 01 D4000C03	\$ 10 L SPC3A	30C13870	o o		30C14550
F9 00 65001000	LDX L1 /1000 SET INTERRUPT	30C13880		* 0839 0 0000 READY DC *-*	30C14560 30C14570
FB 0 6922	STX 1 WCNT WAIT CNT	30C13890 30C13900	\mathbf{c}	083A 0 61FD LDX 1 -3	30C14580
FC 01 65000B05	WAITI LOX LI WAITS	30C13910	`	0B3B 0 692D STX 1 DLYCT	30C14590
FE 01 740005E6	MDX L MLSCF+1 CK FOR INTERRUPT	30C13920	$\epsilon \cdot \alpha$	OB3C O OBDD RDYL XIO SENSE-1 SENSE DSW OB3D O1 E4000BFF AND L KFF00 CK BITS 0-7	30C14600 30C14610
00 0 700F	MDX WAIT4 BR IF INTERRUPT	OCCURED 30C13930 30C13940	,	OB3F O DO9D STO DSWW STORE DSW IN MS	
01 01 600005E5	WAIT2 STX L1 MLSCF SET RETURN ADDRE	SS 30C13950		0840 01 4C980B39 BSC I READY, ← READY IF BRANCH	
03 00 44800161	BSI I START GO TO MONITOR	30C13960 30C13970		0842 0 E025 AND RDYMK MSK NRDY BIT 0843 01 74030869 MDX L DLYCT ₇ 3	30C14640 30C14650
05 01 74FF0B1E	WAITS MOX L WONT 1 DECREMENT WAIT C			0845 0 7007 MDX RDY2	30C14660
07 0 70F4	MDX WAIT1	30C13990	$\mathbf{C} = \mathbf{C} + \mathbf{C}$	0846 01 442009F9	30C14670 AGE 30C14680
08 0 0811	XIO SENSE-1 SENSE NO INTRPT	30C14000 DSW 30C14010		\$	30C14690
309 0 DOD3	STO DSWW SET IN MSG	30C14020	O [0848 00 44800163 BSI I LOG TYPE	30C14700 30C14710
30A 0 COD5	LD BDSW+1 LD BUSY DSW S/B EOR BDSW CGMPARE WITH BUS	30C14030 · Y DSW 30C14040		OB4A 1 OB6A DC STM MESSAGE	30C14720
008 0 F0D3 000 01 44200A02	BSI L ERR2, Z BR IF BUSY DSW E		0	0848 0 1810 SRA 16 SET TO DELAY FO	
	•	30C14060		084C 0 DOIC STD DLYCT TEN SECONDS 084D 01 65000B3C RDY2 LDX L1 RDY1	30C14740 30C14750
OE 01 4C000A0C	BSC L ERR3 GO PRINT NO INTR	PT MSG 30C14070 30C14080	c	084F 01 6D0005E6 STX L1 MLSCF+1	30C14760
10 01 C40005E0	HAIT4 LD L SM1	30C14090	-	0851 01 4C000B10 BSC L WAIT4 CK ROUTINE SELE	CT SWS 30C14770 30C14780
12 00 44880161	BSI I START.+ CK FOR RTN SELEC S L RID CK FOR NEW ROUTI		- 0	* ********************************	
14 01 940005DD 16 00 44980161	S L RID CK FOR NEW ROUTE BSI I START. BR IF NOT NEW RT	N 30C14120	**·	• FORM CHECK	30C14800
18 01 44000600	BSI L CNTRL	30C14130	· ·	**************************************	
31A 0000	BSS E	30C14140 30C14150	• 1	* AFTER A SPACE OR SKIP COMMAND	30C14830
31A 0 0000	ICNT DC +-+	30C14160	•	***************************************	30C14840 30C14850
18 0 3700	SENSE DC /3700 SENSE MITHOUT RE	SET 30C14170 30C14180		08 53 0 0000 FORMS DC	30C14850 30C14860
1C 0 0000 1D 0 0000	TBDSW DC +-+ INT DSW ER BITS	3001-190		0854 0 61FD LDX 1 -3	30C14870
1E 0 0000	MCNT DC +-+	30C14200	,	0855 0 6913 STX 1 DLYCT 0856 0 08C3 FORM1 XIO SENSE-1	30C14880 30C14890
	* ********************************	30C14210 30C14220		0857 0 1005 SLA 5	30014900
•	* ENTER HERE AFTER INTERRUPT	30C14230	•	0858 01 4C900B53 BSC I FORMS BR IF NO FORMS	
	*	30C14240 30C14250		085A 01 74030869 MDX L DLYCT.3	30C14920 30C14930
IF O COCO	RTRN LD BDSH+1 LD BUSY DSH S/B	30C14260	<i>(</i>)	OB5C O 7005 MDX FORM2	30C14940
20 0 F08E	EOR BOSW COMPARE WITH BUS	Y DSW 30C14270		OB5D 00 44800163 BSI I LOG TYPE OB5F 1 OB6A DC STM MESSAGE	30C 14950 30C 14960
21 01 44200A02	BSI L ERR2, Z BR IF BUSY DSW E	RR 30C14280 30C14290	(C	COSE T OBOY OF DE 214 HE22ME	30C1490 30C14970
23 0 COF9	LD EBITS CK FOR INTRPT DS			0860 0 1810 SRA 16 SET TO DELAY FO	
			r = cv		
TE 02JAN66	01MAY66 01JUL66 15NOV66 03APR67	PROG ID 030C-2		DATE 02JAN60 01MAY66 01JUL66 15NDV66 03APR67	PROG ID 030C-

IBM MAINTENANCE D	IAGNOSTIC PROGRAM FOR THE	E 1130 SYSTEM	PART NO. 2191220 PAGE 12	O.	o	IBM MAINTENANCE DIA	AGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. 2191220 PAGE 12A
1132 PRINTER FUNC	TION TEST	ti medicini programa Programa Programa		c	C	1132 PRINTER FUNCTI	ION TEST	
0861 0 D007	STO DLYCT	TEN SECONDS	30C14990 30C15000	C	0	And the second	# IDLE CNT=0, SET TO RETURN	30C15670 30C15680
0862 01 65000856 0864 01 6D0005E6 0866 01 4C000810	FORM2 LDX L1 FORM1 STX L1 MLSCF+1 BSC L WAIT4	CK ROUTINE SELECT SMS	30C15010 30C15020 30C15030 30C15040	(c -	0899 0 1810 089A 0 6310 089B 01 74000C02	SRA 16 LDX 3 16 LDX 3 16 MDX L SPCSW,O CK SPACE—PRINT ON SW	30C15690 30C15700 30C15710 30C15720
0868 0 FB00 0869 0 0000	R DYMK DC /FB00 DLYCT DC 0	DELAY COUNTER	30C15050 30C15060 30C15070			089D 0 7003 089E 0 D065	MDX PI2 * STO RTRNS SET TO RETURN TO MAINLN	30C15730 30C15740 30C15750
086A 0 0001 086B 0 0000	STM DC 1	MESSAGE NUMBER HEX/DECIMAL SH	30C15080 30C15090 30C15100	: ;		089F 0 6865 08A0 0 706A	STX 3 STPCT THEN TURN PRINT OFF MDX SKINT	30C15760 30C15770 30C15780
086C 0 0001 086D 1 0D85 086E 0 0000 086F 0 1132	DC /0001 DC ANRDY DC 0 DC /1132	DATA WORD ID MACHINE TYPE	30C15110 30C15120 30C15130 30C15140				* SPACE WITH PRINTER ON	30C15790 30C15800 30C15810 30C15820
	*	en e	30C15150 30C15160 30C15170	C		OBA1 01 74FF0C02 OBA3 0 1000 OBA4 0 6860	PI2 MDX L SPCSW =-1 DEC SPACE COUNT NOP STX 3 STPCT	30C15830 30C15840 30C15850
	*	T ROUTINE	30C15180 30C15190 30C15200	c	a s	OBA5 O CO63 OBA6 O1 ECOOOB1C OBA8 O1 D4000AEO OBAA O0 67002200	LD K1200 OR L TBDSW BIULD BUSY DSW STO L BDSW+1 LDX L3 /2200 SET EXPECTED SPACE	30C15860 30C15870 30C15880 30C15890
0870 0 0000 0871 01 6E000C3D 0873 0 1810 0874 01 D4000BFC	PIRT DC ++ STX L2 IOUT2+1 SRA 16 STO L EXPCT+2		30C15210 30C15220 30C15230 30C15240	e	· ·	OBAC O 67002200 OBAC O 684E OBAD OO 67009200 OBAF O 684A OBBO O1 66000062	STX 3 EXPCT+1 RESPONSE DSW LDX L3 /9200 SET EXPECTED EMIT STX 3 EXPCT RESPONSE DSW LDX L2 ASPIN	30C15900 30C15910 30C15920 30C15930
08 76 00 670005DC 08 78 0 6BA5 08 79 01 74010B1A 08 78 0 1000	LDX L3 1500 STX 3 WCNT MDX L ICNT,1 NOP	RESET INTERRUPT WAIT COUNTER CNT INTERRUPTS	30C15250 30C15260 30C15270 30C15280	C		0882 01 6E000AD0	STX L2 OPSW SET LAST OP SW * XIO STSPA-1 SPACE	30C15940 30C15950 30C15960
087C 01 0C000BEE 087E 0 D06F 087F 01 D4000C04	* XIO L SRSET-1 STO WAS STO L RTRNS	SENSE AND RESET DSW SAVE DSW	30C15290 30C15300 30C15310 30C15320			0885 01 0C00081A 0887 0 E048	* XIO L SENSE-1 SENSE BUSY DSW AND K7FOO MASK EMIT RESPONSE AND CHANNEL BITS	30C15970 30C15980 30C15990 30C16000
0881 01 4C100C08	BSC L SKINT,-	BR IF NOT PRINT RESP	30C15330 30C15340 30C15350			08 B 8 01 D4000 ADF 08 B A 01 4C000C3C	STO L BDSW SAVE BUSY DSW BSC L IOUT2	30C16010 30C16020 30C16030
08.83 Q 0.86E	PINT XIO RDENT	READ EMIT	30C15360 30C15370 30C15380 30C15390	o		08BC 01 74FF0BF0 08BE 0 7006	PI3 MDX L SCNCT1 DEC SCAN CNT MDX PI4 GO SET UP PRINT BUFFER *	30C16040 30C16050 30C16060 30C16070
0884 0 C075 0885 0 D076 0886 01 44000C4D	LD EXPCT STO EXPCT+2 BSI L CKEMT	BUILD EXPECTED DSW CK EMIT SEQUENCE	30C15400 30C15410 30C15420	0		08BF 01 440009BA	BSI L CLEAR SET BUFFER TO ZERO	30C16080 30C16090 30C16100 30C16110
0888 0 C067 0889 01 4C30088C	LD SCNCT BSC L PI3,Z-	CHECK FOR PRINT BR IF PRINT	30C15430 30C15440 30C15450 30C15460	C,		08C1 00 67008200 08C3 0 6836 08C4 0 7046	LDX L3 /8200 SET EXPCT FOR STX 3 EXPCT NORMAL PRINT DSW MDX SKINT	30C16120 / 30C16130 30C16140
0888 0 C071 088C 01 4C200896	LO IDLCT BSC L PI1,Z	CK FOR IDLE BR IF IDLE	30C15470 30C15480 30C15490	0	•	eff our english file of	SET UP PRINT BUFFER	30C16150 30C16160 30C16170 30C16180
088E 01 74FF0C05 0890 0 707A	MDX L STPCT -1 MDX SKINT		30C15500 30C15510 30C1552C 30C15530	~ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	· ·	08C5 0 10A0 08C6 01 C4000988	PI4 SLT 32 LD L MSGSW CK MSG SW	30C16190 30C16200 30C16210
	◆ *** · · · · · · · · · · · · · · · · ·	NTER	30C15540		e e	08C8 01 4C200C9F 08CA 01 678005E1 08CC 0 1847	BSC L MSCAN,Z IF SW ON- GO SET UP MSG LDX 13 SW2 SRA 71	30C16220 30C16230 30C16240
0891 0 D068 0892 0 D089 0893 0 D060 0894 0 0857 0895 0 7075	STO EXPCT STO TBDSW STO EMTSW XIO STPPT-1 MDX SKINT	RESET 1ST EMIT SW STOP PRINTER	30C15570 30C15580 30C15590 30C15600 30C15610			08CD 0 73FF 08CE 0 70FD 08CF 00 67000000 08D1 00 66000000 08D3 0 C228	MDX 3-1 MDX 4-3 PI5 LDX L3 4-4 INITIALIZED TO -16 PI6 LDX L2 4-4 INITIALIZED TO -8 LD 2 40 LD MORD TO SHIFT	30C16250 30C16260 30C16270 30C16280 30C16290
0896 01 74FF08FD 0898 0 7072	PI1 MDX L IDLCT1 MDX SKINT	DEC IDLE CNT The emerge due to a min The constant meaning of	30C15620 30C15630 30C15640 30C15650	<i>C</i>		08 D4 0 18C 1 08 D5 0 D228 08 D6 0 7301 08 D7 0 7007	RTE 1 SHIFT BIT STORE STORE 2 40 MDX 3 1 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	30C16300 30C16310 30C16320 30C16330
DATE :: 02,JAN66 EC NO. 415490		NOV66 03APR67 9643 419643D	30C15660 PROG ID 030C-2 PAGE 12		· · · · · · · · · · · · · · · · · · ·	08 D8 0 7201 DATE 02 JAN66 EC. NO. 415490	MDX 2 1 3 8 3 ADV TO NEXT HORD 01MAY66 01JUL66 15NOV66 03APR67 415490B 415490C 419643 419643D	30C16340 PROG ID 030C-2 PAGE 12A
	124400 4124400 41		nasti 1911 – Janobias					Andrew State (1997)
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AINTENANCE DI	AGNOSTIC PROGRAM FOR TH	E 1130 SYSTEM	PART NO. 2191220 Page 13	(Ō	ION MAINTENANCE DI	AGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. Page
PRINTER FUNCT	ION TEST			1	Ō	1132 PRINTER FUNCT	ION TEST	
0 7001 0 70E4	MDX #+1 MDX PI3+3	FINISHED- STOP PRINT	30C16350 30C16360	(Ć)	0C 14 0 7001 0C 15 0 7003	MDX SKIN1 MDX SKIN2	30C17030 30C17040 30C17050
0 63F0	• LDX 3-16	RESET SHIFT CNT	30C16370 30C163b0	ŧ	()	0C16 01 74FF0939 0C18 0 7003	SKIN1 MDX L SKCNT1 STOP CARRIAGE AFTER 16 MDX SKIN3 SKIP INTRPTS WITHOUT	30C17060 30C17070
0 1090 00 06000028	SLT 16 STO L2 40	SET NEXT WORD	30C16390 30C16400	,	ı	OC19 O1 OCOOOBFO	* A MATCH SKINZ XIO L STPCA-1 STOP CARRIAGE	30C17080 30C17090
C021	P17 LD K0001	DESTONE SCAN COMO BIT	30C16410 30C16420 30C16430	,		OC 18 0 7016	MDX SPIN2	30C17100 30C17110
00 EC000027 00 D4000027	OR L 39 Sto L 39	RESTORE SCAN COMP BIT	30C16440	:		OC1C 0 COD1 OC1D 0 1008	SKIN3 LD WAS SLA 8 COMPARE PRESENT CHANNEL	30C17120 30C17130
D 6BEB D 6AEC	STX 3 PI5+1 STX 2 PI6+1	SAVE XRI SAVE XR2	30C16450 30C16460			OC1E 01 F4000938	EOR L SKPTO WITH DESIRED	30C17140
01 74010BEC	MDX L BLANK,1	WHEN ZERO- PUT BLANK	30C16470	í	Ý	0C 20 01 4C200C3C 0C22 0 70F6	BSC L IOUT2.Z BR IF NOT EQUAL MDX SKIN2	30C17150 30C17160
0 7022	MDX SKINT	IN PATTERN	30C16480 30C16490				•	30C17170 30C17180
0 63CF 0 6801	LDX 3 —49 STX 3 BLANK	PUT BLANK In Pattern	30C16500 30C16510	C1			* SPACE INTERRUPT	30C17190
7009	NDX PI4	att i mi i bitte	30C16520	^			*	30C17200 30C17210
	*		30C16530 30C16540	O		OC23 O COCA	SPINT LD WAS	30C17220
	+ CONSTANTS AND STORAG	E	30C16550 30C16560	O		0C24 0 1002 0C25 01 4C100C35	SLA 2 BSC L IOUT,- BR IF NOT SPACE	30C17230 30C17240
	*		30C16570	Č		0C27 0 6310 0C28 0 C002	LDX 3 16 SET TO HOLD PRNTR ON LD EXPCT+1 LD EXPCT SPACE DSW	30C17250 30C17260
0000 0 0000	BSS E Blank DC *-*	PATTERN BLANK CNT	30C16580 30C16590	0	}	OC 29 0 E8D2	OR EXPCT+2 BUILD EXPECTED DSW	30C17270
3440	STPPT DC /3440	STOP PRINTER	30C16600	_		OC2A O EOD3 OC2B O DODO	AND KEFG9 Sto Expct+2	30C17280 30C17290
0 0000 0 3701	WAS DC +-+ SRSET DC /3701	INTERRUPT DSW Sense and reset dsw	30C16610 30C16620	\mathbf{C}		OC 2 C O COD5	LD SPCSW CK SPACE-PRINT ON SW	30C17300 30C17310
0000	SCNCT DC +-+ STPCA DC /3402	SCAN CCUNT STOP CARRIAGE	30C16630 30C16640			OC2D 01 4C200BA1	BSC L PI2,Z BR IF ON	30C17320
1 OCOA	RDENT DC ENIT	READ COUNTER	30C16650	1		0C2F 0 C0CE 0230 0 E0C9	SPIN1 LD KEFOO AND EXPCT REMOVE CARRIAGE BUSY	30C17330 30C17340
0 3200 0 0000	DC /3200 EMTSW DC +-+	SCANNED FIRST ENIT SW	30C16660 30C16670			0C31 0 D0C8	STO EXPCT	30C17350
0 3401	STSPA DC /3401	START SPACE	30C16680 30C16690	1		0C32 0 1810 0C33 0 D0C7	SPIN2 SRA 16 STO EXPCT+1 RESET SKIP/SPACE EXPCT	30C17360 30C17370
0 0000 0 0000	ANDEM DC +-+		30C16700	·	1	OC34 0 7003	MDX [OUT]	30C17380 30C17390
0 BF00 0 0000	ANDOR DC /BF00 DC /0000	EMIT CK CONSTANT	30C16710 30C16720	O			\$	30C17400
0 0000	EXPCT DC +-+	EXPECTED INTRPT DSW	30C16730	O			* RETURN FROM INTERRUPT	30C17410 30C17420
0 0000 0 0000	DC +-+		30C16740 30C16750	v	* .		\$	30C17430 30C17440
0 0000	I DLCT DC *-* KEFOO DC /EFOO	IDLE COUNT	30C16760 30C16770	e		0C35 0 C0CE 0C36 01 4C280C3C	IOUT LD RTRNS BSC L IOUT2,Z+ GO RTRN IF NOT PRINT	30C17450
D EFOO D FFOO	KFF00 DC /FF00		30C16780	v		OC 38 O1 67000B1F	* IOUT1 LDX L3 RTRN	30C17460 30C17470
7F00 0 0001	K7F00 DC /7F00 K0001 DC /0001		30C16790 30C16800	C	I	OC3A 01 6F0005E6	STX L3 NLSCF+1 SET MLSCF	30C17480
0000	SPCSW DC +-+	SPACE WITH PRINT ON SW	30C16810	•	}	OC3C 00 66000000	* IOUT2 LDX L2 *-* RESTORE XR2	30C17490 30C17500
0000	SPCSX DC +-+		30C16820 30C16830	·C	-,	OC3E 01 7400G91D	MDX L EBITS SKIP IF NO DSW ER	30C17510 30C17520
0000	STPCT GC *-* CHARC DC *-*	STOP PRINTER COUNT TEMPORARY STORAGE	30C16840 30C16850			0C40 0 700A	MDX IOUT3	30C17530
0000	CKESH DC +-+	ERROR SWITCH	30C16860	C	Ü	0C41 0 COAC 0C42 01 D4000AE1	LD WAS LD DSW STO L IDSW STO DSW WAS	30C17540 30C17550
0 0000 0 1200 -	EMTCT DC *-* K1200 DC /1200	EMIT COUNTER	30C16870 30C16880			0C44 0 F0B7	EOR EXPCT+2 COMPARE WITH EXPECTED DSW	30C17560
0000	EMIT DC +-+		30C16890 30C1 c 900	\mathbf{c}	0	0C45 0 E0B8 0C46 01 D4000B1D	AND KEFOO Sto L ebits save er bits	30C17570 30C17580
	*		30C16910		, " .	0C48 0 F0A5	EOR WAS BUILD DSW S/B STO L IDSW+1 STO DSW S/B	30C17590 30C17600
	SKIP INT	ERRUPT	30C16920 30C16930	t ·		0C49 01 D4000AE2 0C4B 01 4C800B70	IOUTS BSC PIRT	30C17610
	•		30C16 94 0	<i>2</i> .	0		*	30C17620 30C17630
0 COE2 0 1001	SKINT LD WAS	LD DSW	30C16950 3 0C16960	()			CHECK ENIT	30C17640
01 4C100C23	BSC L SPINT,-	BR IF NOT SKIP	30C16970	0	√-,		* THIS SUBROUTINE FINDS THE FIRST CHARACTER	30C17650 30C17660
D COEB	LD EXPCT+1	LD EXPCT SKIP DSM	30C16980 30C16990	₹!			* EMITTED IN THE TABLE	30C17670
O ESEB	OR EXPCT+2	BUILD EXPECTED DSW	30C17000 30C17010	C	 		ŧ	30C17680 30C17690
O DOEA Ol 74000938	STO EXPCT+2 MDX L SKPTO	CK SKIP TO	30017010	•	f .	OC4B 0 0000	CKENT DC	30C17700

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1132 PRINTER FUNCTION TEST

DATE EC NO.	02JAN66 415490	0 1M AY			UL66 15NO 490C 4196		PROG ID Page	030C-2
		•			MESSAGE SE	T UP	30C18380	
	£*	****	****	**		******	30C18370	
CAR 01	4C800C4D		BSC		CKENT		30C18360	
	6F000C07				CKESH	SET ERROR SM	30C18340 30C18350	
C99 01	67000A45		LDX	L3	ERR8		30C18330	
	4C180C6D		BSC	ĩ	CKEM2++-	YES, IF BRANCH	30C18320	
	D4000ADC 94000C0A		\$10 \$		EMTSB	STO EMIT S/B IS IN THE PROPER SEQUENCE	30C18300 30C18310	
	C7000CEA		LD		CHAR+48	CHAR EMITTED	30018290	
	67800C06				CHARC		30C18280	
		•					30C18270	
		*					30C18250	
		* WIT	H THE	TA	BLE OF CHAR	ACTERS IN THE PROPER SEQ	30C18250	
		& THI	5 5110	BUIL	LINE CHECKS	THE CHARACTER ENITTED	30C18240	
							30C18220 30C18230	
CBE 0	70A9	_	MDX		IOLT1		30018210	
C8C 01	D4000BF4	\$	STO	L	EMTSH	RESET 1ST EMIT SW	30C18200	
CBA OL	D4000B1C		STO	Ĺ	TBDSW		30018190	
C88 01	D4000BFA		STO	L	EXPCT		30018180	
C87 01	1810		VIV AB2	-	31771 -1	SIUP PRINIER	30C18170	
C84 0	6B83		STX	. 3	EMICT	KESET EMIT CK CNT	30018120	
C83 0	6364		LDX	3	100		30C18140	
C81 01	DCOCOBF6		STD	L	ANDEM	CHECK WORD	30C18130	
C7F 01	CC000BF8	. 19	LDD	Ĺ	ANDOR	REINITIALIZE EMIT	30018120	
C7D 01	DCOOOADB		STD	L.	ERM4	SET IN MESSAGE	30018110	
C78 01	CCOOOREA		91%	3	ANDEM	LD FRROR CODE	30018100	
578 O1	67000A35	1 4	LDX	L3	ERR6	SET ED SW EDD ED 4	30018080	
C77 0	7004	254	MDX		IOUT2	THEN SKIP	30C18070	
C75 01	74FF0C08	CKEM5	MDX	L	ENTCT1	CNT 100 EMITS	30C 18060	
				-	- -		30C18050	
C73 01	4C800C4D	CKEM4	BSC	ī	CKEMT		30C18040	
C71 01	6F000C06	CKEM3	STX	L3	CHARC		30C18030	
C70 0	1001		TDX	3	-48	IF XR3 = O. RESFT	30C18020	
LOE O	7001	ingto etgelia	WDY	3	CKEM3	AND SAVE	30018010	
CAE O	6886 7301	L REM2	71X	2	FMI2A	DECREMENT AS EUD MEAA CHAS.	30018030	
	4004					DECET SET CEAN EN	30017980	
C6C 0	7006	_	MDX		CKEM4		30C17970	
C68 0	6898	1.00	STX	3	CKESM	a e e o Ca	30017960	
C69 01	67000A3D	and the second	LDX	L3	ERR7		30017950	
C68 0	70F9	ing salah Salah Kabupatèn	MDX		CKEMI	TO TO HEAT TABLE ENTAL	30C17940	
C67 N	7301		MDX	3	1	GO TO NEXT TABLE ENTRY	30C17930	
CAS 01	ACT BUCKU		B C C	a	CKEM2-4-	FOUND IF RR	30017920	
L62 01	C7000CEA	CKEMI	LD	L3	CHAK+48	EMITTED IN	30017900	
C61 0	63D0	C VCM*	LDX	3	-48 CHARA 40	FIND FIRST CHARACTER	30C17890	
	21 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 0 - 27			* 3.2		30C17880	
C5F 01	4C200C75		BSC	L	CKEM5 .Z	CONT IF ALL EMIT BITS OK	-30C17870	
CSE O	FOAO		EOR		KFF00	a mengampangan di mengangan di kelalah di ke Kelalah di kelalah di k	30C17860	
C50'0	F094		EOR		OREM	CK FOR EMIT BITS OK	30C17850	
656 A	DO99		STO		ANDEM	0000 IF OK	30C17840	
LSA U	EOO A		FD		EW11	CK EUB ZHUBIEN EMIL BILC	30017820	
C59 0	D09D		STO		OREM	FFOO IF OK	30017810	
C58 0	E89E	\$1.00 m	OR		OREM	CK FOR MISSING EMIT BITS	30C17800	
C57 0	COB2		LD		TIME		30C17790	
		•					30C17780	
C56 0	7038		MDX	_	CKEM6	BR IF NOT FIRST	30017770	
C54 01	74000BF4		MDX	L	ENTSW	STO EMIT WAS CK FOR FIRST EMIT BR IF NOT FIRST CK FOR MISSING EMIT BITS FFOO IF OK CK FOR SHORTED EMIT BITS 0000 IF OK CK FOR EMIT BITS OK CONT IF ALL EMIT BITS OK FIND FIRST CHARACTER EMITTED IN SEQUENCE TABLE FOUND IF BR GO TO NEXT TABLE ENTRY RESET 1ST SCAN SW DECREMENT XR FOR NEXT CHAR AND SAVE IF XR3 = 0, RESET CNT 100 EMITS THEN SKIP SET ER SW FOR ER 6 LD ERROR CODE SET IN MESSAGE REINITIALIZE EMIT CHECK WORD RESET EMIT CK CNT STOP PRINTER RESET 1ST EMIT SW THE CHARACTER EMITTED ACTERS IN THE PROPER SEQ	30C17760	
~>~ 01	DACONDO	•	3.0	_	FU1#9	STO ENET WAS	30C17750	
52 N	DACIONADA		STO		ENTUS	STO FMIT MAS	30017740	
E 1 0	C089		10		CKEMIOZ		30017720	
LO+01	al allocan							

* THIS SUBROUTINE SCANS THE PRINTER RESSAGE **AND SETS THE PRINT BEFER FOR THE NEXT ENIT.* **CAP 0 0 10AD **CAP	OCCO OCCO OCCO OCCO OCCO OCCO OCCO OCC	F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 6000 4E00 6100 5C00 5000 D100 D200 D300 D400 D500 D600 D700 D800				F600 F700 F800 F900 F900 F000 5800 4800 7000 6800 5000 5000 5000 5000 D100 D200 D300 D400 D500 D5000 D	67890=\$		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18860 30C18870 30C18880 30C18900 30C18910 30C18920 30C18940 30C18950 30C18970 30C18970 30C18980 30C18990 30C19010 30C19020 30C19030 30C19040 30C19050	
* THIS SUBBOUTINE SCANS THE PRINTER RESSAGE *AND SETS THE PRINT BHEFER FOR THE NEXT ENIT. ***** ******* ****** ****** ***** ****	OCCO OCCO OCCO OCCO OCCO OCCO OCCO OCC	F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 6000 4E00 6100 5C00 5000 D100 D200 D300 D400 D500 D600 D700 D800				F600 F700 F800 F900 F900 F000 5800 4800 7000 6800 5000 5000 5000 5000 D100 D200 D300 D400 D500 D5000 D	67890=\$		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18860 30C18870 30C18880 30C18900 30C18910 30C18920 30C18940 30C18950 30C18970 30C18970 30C18980 30C18990 30C19010 30C19020 30C19030 30C19040 30C19050	
** THIS SUBROUTINE SCAMS THE PRINTER RESSAGE 30C18400 *** AND SETS THE PRINTE DEFER FOR THE NEXT ENIT. 30C18420 **** OCCATO 10AD	OCCO OCCC OCCC OCCC OCCC OCCC OCCC OCC	F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 6000 4E00 6100 5C00 5C00 5C00 D100 D200 D300 D400 D500 D600 D700				F600 F700 F800 F900 F900 7E00 5B00 4B00 7D00 6B00 6B00 6B00 6B00 6B00 6B00 F000 D100 D200 D300 D400 D500 D500 D500 D500 D500	67890=\$.=.)-(+/s+JKLMNOP		30C18800 30C18810 30C18820 30C18840 30C18850 30C18860 30C18870 30C18880 30C18890 30C18910 30C18920 30C18940 30C18950 30C18950 30C18960 30C18970 30C18980 30C18990 30C19010 30C19010 30C19010 30C19040	
* THIS SUBRUTINE SCANS THE PRINTER MESSAGE ** **AND SETS THE PRINT BUFFER FOR THE NEXT BHIT** **30C16410** **30C16420** **30C16430** **CA10*** **CA10** **CA10*** **CA10*** **CA10*** **CA10*** **CA10*** **CA10** **CA10	0CC0 0 0CC1 0 0CC2 0 0CC3 0 0CC4 0 0CC5 0 0CC6 0 0CC8 0 0CCB 0 0CCB 0 0CCD 0 0CCD 0 0CCD 0 0CCD 0 0CCD 0 0CD0 0 0CD1 0 0CD2 0 0CD3 0	F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 6000 4D00 4E00 6100 5C00 5C00 5C00 D100 D200 D300 D400 D500				F600 F700 F800 F800 F800 5800 4800 5000 5000 6000 4E00 6100 5000 D100 D200 D300 D500 D500	67890=\$) — (+ / + J K L M N O		30C18800 30C18810 30C18820 30C18840 30C18850 30C18860 30C18880 30C18890 30C18990 30C18910 30C18920 30C18940 30C18950 30C18950 30C18970 30C18980 30C18990 30C18990 30C18990 30C19000 30C19020 30C19030	
* THIS SUBRUTINE SCANS THE PRINTER MESSAGE ** **AND SETS THE PRINT BUFFER FOR THE NEXT ENIT: 30018420	OCCO 0 OCC1 0 OCC2 0 OCC3 0 OCC4 0 OCC5 0 OCC6 0 OCC7 0 OCC8 0 OCC8 0 OCC6 0 OCC6 0 OCC0 0	F600 F700 F800 F900 F900 7E00 5800 4800 7D00 6800 5D00 6000 4D00 4E00 6100 5C00 5000 D100 D200 D300 D400				F600 F700 F800 F900 7E00 5B00 4B00 7D00 6B00 6B00 6B00 6B00 6B00 5D00 6B00 5D00 6B00 5D00 6B00 5D00 6B00 5D00 6B00 6B00 6B00 6B00 6B00 6B00 6B00 6	67890=\$ ·= ·) - (+ / + + J K L M N		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18860 30C18870 30C18890 30C18900 30C18910 30C18930 30C18940 30C18950 30C18950 30C18970 30C18980 30C18980 30C18990 30C18990 30C18990 30C19010	
* THIS SUBRUITINE SCANS THE PRINTER MESSAGE ** ***AND SETS THE PRINT BUFFER FOR THE NEXT ENIT.** ***30C18430* ***30C18430* ***30C18430* ***30C18430* ***30C18430* ***SCAN LDX 3 -32 SET TO SCAN BUFFER 30C18430* ***SCAN LDX 3 -32 SET TO SCAN BUFFER 30C18430* ***SCAN LDX 3 -32 SET TO SCAN BUFFER 30C18430* ***SCAN LDX 3 -32 SET TO SCAN BUFFER 30C18430* ***SCAN LDX 2 0 30C18430* ***SCAN CARDON SET TO SCAN BUFFER 30C18430* ***SCAN LDX 2 0 30C18430* ***SCAN LDX 2 1	OCCO OCCC OCCC OCCC OCCC OCCC OCCC OCC	F600 F700 F800 F900 F900 7E00 5B00 4B00 7D00 6B00 5D00 6000 4D00 4E00 6100 5C00 5000 D100 D200 D300				F600 F700 F800 F900 7E00 5B00 4B00 7D00 6B00 6B00 6B00 6B00 5D00 6B00 5D00 6B00 5D00 6B00 5D00 6B00 5D00 6B00 5D00 6B00 5D00 6B00 5D00 6B00 5D00 6B00 5D00 6B00 6B00 6B00 6B00 6B00 6B00 6B00 6	67890=\$		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18870 30C18880 30C18890 30C18910 30C18920 30C18930 30C18940 30C18950 30C18970 30C18980 30C18980 30C18990 30C18990 30C18990 30C18990 30C18990	
* THIS SUBRUITINE SCANS THE PRINTER MESSAGE ** **AND SETS THE PRINT BUFFER FOR THE NEXT ENIT: 30C18410 **30C18420 **30C18430 **CAR D 10A0 **CAR D 10A00 **CAR D 10A000 **CAR D 10A0000 **CAR D 10A0000 **CAR D 10A00000 **CAR D 10A0000000000000000000000000000000000	OCCO OCCO OCCO OCCC OCCC OCCC OCCC OCC	F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 6000 4D00 4E00 6100 5C00 5D00 D100 D200				F600 F700 F800 F900 F900 7E00 5B00 4B00 7D00 6B00 5D00 6D00 4D00 4E00 6100 5C00 D100 D200	67890=\$		30C18800 30C18810 30C18820 30C18840 30C18850 30C18860 30C18870 30C18890 30C18900 30C18910 30C18920 30C18930 30C18950 30C18950 30C18950 30C18970 30C18980 30C18980	
# THIS SUBROUTINE SCANS THE PRINTER MESSAGE #AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. 30C18410 30C18420 \$ ***********************************	OCCO OCCC OCCC OCCC OCCC OCCC OCCC OCC	F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 6000 4E00 6100 5C00 5C00 5C00 5C00				F600 F700 F800 F900 F900 7E00 5B00 4B00 7D00 6B00 4D00 4E00 6100 5C00 D100	6 7 8 9 0 * * * -		30C18800 30C18810 30C18820 30C18840 30C18850 30C18860 30C18870 30C18880 30C18890 30C18910 30C18920 30C18940 30C18940 30C18950 30C18950 30C18970 30C18970	
* THIS SUBROUTINE SCANS THE PRINTER MESSAGE **AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. 30C18410 30C18420 ** **CC9F 0 63E0 CCA0 0 10A0	OCCO OCCC OCCC OCCC OCCC OCCC OCCC OCC	F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 6000 4D00 4E00 6100 5C00				F600 F700 F800 F900 F900 7500 5800 4800 7000 6800 5000 6000 4000 6100 5000	67890		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18860 30C18880 30C18890 30C18910 30C18920 30C18930 30C18940 30C18950 30C18950 30C18970	
* THIS SUBROUTINE SCANS THE PRINTER MESSAGE **AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. 30C18410 30C18420 **30C18430 ** **CAD 0 10A0 0 10A0 0 SLT 32 SET TO SCAN BUFFER 30C18440 0 CCAD 0 10A0 0 SLT 32 30C18450 30C18500 30C18450 30C18500 30C185	OCCO OCCC OCCC OCCC OCCC OCCC OCCC OCC	F600 F700 F800 F900 F900 7E00 5B00 4B00 7D00 6B00 5D00 6000 4D00 6100 5C00				F600 F700 F800 F900 F900 7500 5800 4800 7000 6800 5000 4000 4000 6100 5000	67890		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18870 30C18880 30C18890 30C18910 30C18920 30C18930 30C18940 30C18950 30C18950	
* THIS SUBROUTINE SCANS THE PRINTE MESSAGE 30C18400 **AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. 30C18410 **COSP 0 63E0 **CAD 0 10A0 **CAD 0 10A00 **CAD 0 10A0 **CAD 0 10A0 **CAD 0 10A00 **CAD 0 10A00 **CAD 0 10A00 **CAD 0	OCCO OCCO OCCO OCCO OCCO OCCO OCCO OCC	F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 6000 4E00 6100				F600 F700 F800 F900 F000 7E00 5B00 4B00 5D00 6B00 5D00 4B00 4D00 4E00 6100	6 7 8 9 0 		30C18800 30C18810 30C18820 30C18830 30C18840 30C18860 30C18870 30C18880 30C18890 30C18910 30C18910 30C18920 30C18930 30C18940 30C18950	
* THIS SUBROUTINE SCANS THE PRINTER MESSAGE 30C18400 **AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. 30C18430 **CCAO 0 10A0 **CCAO 0 10A0 **CAO 0 10A00 **CAO 0	0CC0 0 0CC1 0 0CC2 0 0CC3 0 0CC4 0 0CC5 0 0CC6 0 0CC7 0 0CC8 0 0CC9 0 0CC8 0	F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 6000 4D00 4E00		DC DC DC DC DC DC DC DC DC DC DC		F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 4D00 4E00	678900		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18860 30C18870 30C18890 30C18900 30C18910 30C18920 30C18930 30C18940	
# THIS SUBROUTINE SCANS THE PRINTER RESSAGE 30C18400 # AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. 30C18420 *** *** *** *** *** *** ***	0CC0 0 0CC1 0 0CC2 0 0CC3 0 0CC4 0 0CC5 0 0CC6 0 0CC7 0 0CC8 0 0CCA 0	F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 6000				F600 F700 F800 F900 7E00 5B00 4B00 7D00 6B00 5D00 6000 4D00	67890		30C18800 30C18810 30C18820 30C18840 30C18850 30C18860 30C18870 30C18880 30C18890 30C18910 30C18910 30C18920 30C18930	
# THIS SUBROUTINE SCANS THE PRINTE RESSAGE 30C18400 # AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. 30C18420 30C18430 CCAP 0 63E0	OCCO O OCC1 O OCC2 O OCC3 O OCC4 O OCC5 O OCC6 O OCC6 O OCC6 O OCC8 O OCC9 O	F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 6000		DC DC DC DC DC DC DC DC DC DC		F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00 5D00 6000	6 7 8 9 0		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18860 30C18870 30C18880 30C18890 30C18910 30C18910	
# THIS SUBROUTINE SCANS THE PRINTER MESSAGE 30C18400 * AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. 30C18410 ** AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. 30C18430 ** CAO 0 10A0 ** CAO 0 10A00 ** CAO 0 10A0 ** CAO 0 10A00 ** CAO 0	OCCO 0 OCC1 0 OCC2 0 OCC3 0 OCC4 0 OCC5 0 OCC6 0 OCC7 0	F600 F700 F800 F900 F000 7E00 5800 4800 7D00 6800		DC DC DC DC DC DC DC		F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00 6B00	6 7 8 9 0 = \$		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18860 30C18870 30C18880 30C18890	
# THIS SUBROUTINE SCANS THE PRINTER MESSAGE 30C18400 * AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. * 30C18430 \$0C 40 0 1040 \$0C 40 0 1040 \$0C 40 0 1040 \$0C 41 00 DC000020 \$10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0CC0 0 0CC1 0 0CC2 0 0CC3 0 0CC4 0 0CC5 0 0CC6 0	F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00		DC DC DC DC DC DC DC		F600 F700 F800 F900 F000 7E00 5B00 4B00 7D00	6 7 8 9 0 = \$		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18860 30C18870 30C18880 30C18890	
# THIS SUBROUTINE SCANS THE PRINTER MESSAGE 30C18400 * AND SEIS THE PRINT BUFFER FOR THE NEXT EMIT. 30C18410 *** *** *** *** *** *** ***	0CC0 0 0CC1 0 0CC2 0 0CC3 0 0CC4 0 0CC5 0	F600 F700 F800 F900 F000 7E00 5B00 4B00		DC DC DC DC DC DC		F600 F700 F800 F900 F000 7E00 5B00 4B00	6 7 8 9 0 = \$		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18860 30C18870	
# THIS SUBROUTINE SCANS THE PRINTER MESSAGE 30C18400 * AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. * 30C18430 30C18430 \$0CA0 0 10A0 \$SLT 32	0CC0 0 0CC1 0 0CC2 0 0CC3 0 0CC4 0 0CC5 0	F600 F700 F800 F900 F000 7E00 5800		DC DC DC DC DC	1	F600 F700 F800 F900 F000 7E00 5B00	6 7 8 9		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18860 30C18870	
# THIS SUBRQUITINE SCANS THE PRINTER MESSAGE 30C18400 # AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. 30C18420 ***OC18420 ***OC18420 ***OC18420 ***OC18420 ***OC18420 ***OC18420 ***OC18420 ***OC18420 ***OC18440 ***OC18420 ***OC18440 ***OC18440 ***OC18420 ***OC18440 ***OC18440 ***OC18440 ***OC18440 ***OC18440 ***OC18440 ***OC18440 ***OC18440 ***OC18440 ***OC18400 ***OC18400 ***OC18400 ***OC18400 ***OC18400 ***OC18400 ***OC18400 ***OC18400 ***OC18400 ***OC18500 **	0CC0 0 0CC1 0 0CC2 0 0CC3 0 0CC4 0	F600 F700 F800 F900 F000 7E00		DC DC DC DC DC	111111111111111111111111111111111111111	F600 F700 F800 F900 F000 7E00	6 7 8 9		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850 30C18860	
# THIS SUBROUTINE SCANS THE PRINTER MESSAGE 30C18400 # AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. 30C18420 *** *** *** *** ** ** ** **	OCCO 0 OCC1 0 OCC2 0 OCC3 0	F600 F700 F800 F900 F000		DC DC DC DC	1	F600 F700 F800 F900 F000	6 7 8 9		30C18800 30C18810 30C18820 30C18830 30C18840 30C18850	
# THIS SUBROUTINE SCANS THE PRINTER MESSAGE 30C18400 # AND SETS THE PRINT BUFFER FOR THE NEXT ENIT. 30C18420 *** 30C18440 *** 30C18440 *** 30C18440 *** 30C18450 *** 30C18450 *** 30C18450 *** 30C18450 *** 30C18450 *** 30C18450 *** 30C18470 *** 30C18480 *** 30C18470 *** 30C18470 *** 30C18480 *** 30C18470 *** 30C18480 *** 30C18490 *** 30C18510 *** 30C18520 *** 30C18520 *** 30C18530 *** 30C18640 ***	0CC0 0 0CC1 0	F600 F700 F800		DC DC DC	1	F600 F700 F800	6 7 8		30C18800 30C18810 30C18820 30C18830 30C18840	
# THIS SUBROUTINE SCANS THE PRINTER MESSAGE # AND SETS THE PRINT BUFFER FOR THE NEXT EMIT. 3001.8400 # 301.8500 # 301.8510 # 301.8500 # 301.8510 # 301.8500 # 301.8510 # 301.8500 # 301.8510 # 301.8500 # 301.8510 # 301.8500 # 301.8510 # 301.8500 # 301.8510 # 301.8500 # 301.8510 # 301.850	OCCO 0	F600 F700		DC DC	1	F600 F700	6 7		30C18800 30C18810 30C18820	
# THIS SUBROUTINE SCANS THE PRINTER MESSAGE # AND SETS THE PRINT BUFFER FOR THE NEXT EMIT. 30C18400 0C9F 0 63E0		F600		DC	/	F600	6	A CAMPANIAN SALAH SA	30C18800 30C18810	
# THIS SURROUTINE SCANS THE PRINTER HESSAGE 30C18400 AND SETS THE PRINT BUFFER FOR THE NEXT EMIT. 30C18400 CC 9F 0 63E0 MSCAN LDX 3 -32 SET TO SCAN BUFFER 30C18440 CC A1 00 10A0 SLT 32 30C18460 CC A2 0 10A0 LDX 2 0 30C18460 CC A3 0 6200 LDX 2 0 30C18480 CC A4 01 4C200CA9 MS1 BSC L MS2,Z CK FOR NEXT BUF WORD 30C18490 CC A7 01 C4000984 LD L K8000 30C18510 CC A7 01 C4000DCE LD L3 BUF432 LD NEXT MSG CHARACTER 30C18540 CC AC 01 74000CDC LD L3 BUF432 LD NEXT MSG CHARACTER 30C18550 CC AC 01 74000CDA EOR LE HIT COMPARE CHAR WITH EHIT 30C18550 CC AC 01 7400CDA EOR LE HIT COMPARE CHAR WITH EHIT 30C18560 CC B0 0 C008 LD TEMP SHIFT TO NEXT MSG CHARSON CC B1 0 EAIF DR 231 PRINT BUFFER 30C18580 CC B2 0 D21F STD 2 31 PRINT BUFFER 30C18580 CC B3 0 C005 MS3 LD TEMP SHIFT TO NEXT MSG 30C18640 CC B4 0 1801 SRA 1 CHAR POSITION 30C18520 CC B5 0 7301 MDX 3 1 ADV TO NEXT CHAR 30C18650 CC B6 0 TOED HDX MS1 CC B9 0 0000 TEMP DC ** PROPER SCAN EHIT SEQUENCE 30C1870 CC B8 0 F100 CHAR DC /F100 1 ** PROPER SCAN EHIT SEQUENCE 30C1870 CC B8 0 F200 DC /F300 3 30C1870 CC B8 0 F200 DC /F300 3 30C1870 CC B8 0 F400 DC /F500 5 30C18800	OC BE A			-,-	/			and the second of the second o	30C18800	
# THIS SURROUTINE SCANS THE PRINTER MESSAGE 30C18400 # AND SETS THE PRINT BUFFER FOR THE NEXT EMIT. 30C18410 30C18430 0C 9F 0 63E0				nc		EEAA	ec.	and the second of the second		
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	D O E800 E O E 9 00	DC DC	/E 800 /E 900	Ž	30C19120			-	_	0016 0		DC	/2184		30C19800
	F C C100	DC	/C 100	Ā	30C19130		1	(.		00 1 T A	5443	APRTR DC	/5662	PRINTER	30C19810 30C19820
	0 0 C200	DC -	/C200	B	30C19140 30C19150					0017 0 0018 0		DC DC	/769E	PRINICA	30C19830
	1 0 C300 2 0 C400	DC . DC	/C300 /C400	. D	30C19160		:	1	-	0019 0		DC	/6200		30C19840
	3 0 C600	DC	/C600	F	30019170					COIA O	FFFF	DC	/FFFF		30C19850 30C19860
	4 0 CB00	DC ·	/C 800	H	30C19180 30C19190		i		-	0018 0	QAQF	ASTPD DC	/SA9E	STOPPED	30C19870
	5 0 C900 6 0 E200	DC DC	/C 900 /E200	1 S	30C19190 30C19200		,			001C 0		DC	/5256	0.000	30C19880
	7 0 E300	DC	/E300	Ť	30C19210					001D 0		DC	/5636		30C19890 30C19900
	8 0 E400	DC	/E400	Ü	30C19220 30C19230					001E 0 001F 0		DC DC	/3200 /FFFF		30C19910
	9 0 E500 A 0 F100	DC DC	/E500 /F100	1	30C19230 30C19240			-			****				30C19920
OC E	A 0 1200	*	71 200	•	30C19250		\mathbf{C}			0020 0		ADNTO DC	/3222	DID NOT TURN	
		******		********	30019260					0021 0 0022 0		DC DC	/3221 /7652		30C19940 30C19950
		*		MESSAGES *****************	30C19270 30C19280		C.			0023 0		DC	/9E21		30C19960
		*			30C19290		·			0024 0		DC	/9EB2		30C19970
	B 0. 923E	AWAS DC	/923E	WAS S/B	30C19300		_			0025 0 0026 0		DC DC	/6276 /2152		30C19980 30C19990
	C 0 9A21	DC DC	/9A21 /219A		30C19310 30C19320		€			0027 0		DC	/1212		30C20000
	D 0 219A E 0 BC1A	DC	/BCIA		30C19330					0028 0		DC	/FFFF		30C20010
OC E	F 0 2100	DC	/2100		30C19340		O			00290	E 284	AEBF DC	/5256	EMIT BIT FAIL	30C20020 URE 30C20030
OCF	O O FFFF	DC .	/FFFF		30C19350 30C19360					0029 U		DC DC	/3676	ENTI DII FAIL	30C20040
OC.F	1 0 2184	A SDSW DC	/2184	STATIC DSW ERR	30C 19370		(0D2B 0	219A	DC	/219A		30C20050
	2 0 9A9E	DC	/9A9E		30019380				4	00 2C 0		DC DC	/2652 /629E		30C20060 30C20070
	3 0 3E9E	DC	/3E9E		30C19390 30C1 94 00	•	í			0020 0 002E 0		DC	/2184		30C20080
	4 0 221E 5 0 2132	DC DC	/221E /2132		30019410					002F 0	3672	, DC	/3672		30C20090
	6 0 9A92	DC	/9A92		30C19420					0030 0		DC	/229E		30C20100 30C20110
	7 0 2136	DC DC	/2136		30C19430 30C19440					0031 0 0032 0		DC DC	/211A /22 9E		30C20120
	8 0 6262 9 0 FFFF	DC	/6262 /FFFF		30019450					00330	2112	DC	/2112		30C 20130
٠.		•			30C19460		C	*		0034 0		DC DC	/3E22		30C20140 30C20150
	A 0 2184	ABDSW DC	/2184	BUSY DSW ERR	30C19470 30C19480					0035 0 0036 0		DC	/5EB2 /6236		30C20160
	8 0 1AB2 C 0 9AA6	DC DC	/1AB2 /9AA6		30019490		\mathbf{C}			0037 0		DC	/FFFF	e e e	30C20170
	D 0 2132	DC	/2132		30C19500						0/30	\$ 4547 05	42472	CMIR INVALD	30C20180 30C20190
	E 0 9A92	DC OC	/9492		30C19510 30C19520		. •			0038 0 0039 0		AEMT DC	/3672 /229E	EMIT INVALD	30C20200
	F 0 2136 0 0 6262	DC DC	/2136 /6262		30C19530					003A 0		DC	/2184		30C2O21 0
	1 0 FFFF	DC	/FFFF		30C19540		_			003B 0		DC	/2276		30C20220
		4	49104	AEMS NEW ERR	30C19550 30C19560		C			003C 0		DC DC	/863E /5E32		30C20230 30C20240
)2 0 2184)3 0 5E36	ADSW1 DC	/2184 /5E36	LEVI DSW ERR	30019570					003E 0		DC	/FFFF		30C20250
	4 0 B6FC	DC	/B6FC		30C19580		ϵ	1.				•		EMIR CEA CAA	30C20260 30C20270
000	5 0 2132	DC	/2132		30C19590 30C19600				1.62	003F 0 0040 0		AESER DC DC	/2184 /3672	EMIT SEQ ERR	30C2O270 30C2O280
	6 0 9A92 7 0 2136	DC DC	/9A92 /2136		30C19610		:	<u> </u>		0041 0		DC	/229E		30C20290
	8 0 6262	DC	/6262	•	30019620					0042 0		DC	/2100		30C20300
	9 O FFFF	DC	/FFFF		30019630		:	0		0043 0 0044 0		ASER DC	/9A36 /6621		30C2O31O 30C2O32O
200.0	A 0 330A	AUCH UL	/329A	DSid	30C19640 30C19650		•	; ,		0045 0		DC	/3662		30C20330
	A 0 329A B 0 9221	ADSW DC	/9221	van N	30C19660		* -	_		0046 0	6200	DC	/6200		30C2034C
	C O FFFF	DC	/FFFF		30C19670		$I^{\prime\prime}$	\circ		0047 0	FFFF	DC .	/FFFF		30C20350 30C20360
		ANINT DC	/2121	NO INTRPT	30C19680 30C19690					0048 0	7222	AMC DC	/7222	MISSING CHANN	
	D 0 2121 E 0 8476	ANINT DC	/8476	no solve	30C19700		\boldsymbol{C}	0		0049 0	9 A 9 A	DC	/9A9A		30C20380
	F 0 5221	DC	/5221		30C19710					004A 0		DC DC	/2276 /1621		30C20390 30C20400
		A INT OF	/2276		30C19720 30C19730		C	n		0048.0 004C.0		ACHAN DC	/162E		30C20400
	0 0 2276 1 0 9E62	A INT DC	/2216 /9E62		30019740		•			0040 0		DC	/3E76		30C20420
w.							,	0							
DAT	E 02JAN66	01MAY66	01JUL66	15N0V66 03APR67	PROG ID	030C-2	1	7.7		DATE	02JAN66	0 1MAY 66	01JUL66	15N0V66 03APR67	PROG ID 030C-2
	NO. 415490			419643 4196430	PAGE	15		_		EC NO.	415490	4154908		419643 4196430	PAGE 15A
_								\circ		The Art of the Control					

1132 PRINTER FUNCTION TEST

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PART NO. 219122

1132 PRINTER FUNCTION TEST

D4E 0	7636	DC	/7636		30C20 4 30
)4F 0	5E00	DC	/5E00		30C20440
50 0	FFFF	DC	/FFFF		30C20450
50 0	rere	•	/////		30C20460
51 0	7282	AMSP DC	/72B2	MULT SPACE	30C20 4 70
52 O	5E9E	DC	/5E9E	HULT STACE	30C20480
53 0	2100	DC	/2100		30C20490
<i></i>	2100	*	72100		30C20500
54 0	9A56	ASPC DC	/9A56	SPACE	30C20510
55 0	3E1E	DC	/3E1E	31 mus	30C20520
56 0	3600	DC	/3600		30C20530
57 0	FFFF	DC	/FFFF		30C20540
,,,,	• • • • • • • • • • • • • • • • • • • •	*	,,,,,		30C20550
58 0	7 <i>2</i> 82	AMSK DC .	/7282	MULT SKIP	30C20560
59 0	5E9E	DC	/5E9E		30C20570
5A 0	2100	DC	/2100		30C20580
,,,	2100	*	, , ,		30C20590
)5B 0	945 A	ASKP DC	/9A5A	SKIP	30C20600
)5C 0	2256	DC	/2256	3007	30C20610
)5D 0	FFFF	DC	/FFFF		30C20620
,,,,	FFFF	*	71111		30C20630
\SE 0	544.2	APRT DC	15442	PRINT	30C20640
05E 0 05F 0	5662 2276	DC	/5662 /2276	FRINI	30C20650
060 O	9E00	DC .	/2210 /9E00		30C20660
061 0	FFFF	DC	/FFFF		30C20670
) 01 U	FFFF	*	7555		30C20680
062 0	9A56	ASPIN DC	/9A56	SPACE- PRINT ON	30C20690
063 0	3E1E	DC	/3E1E	SLUCE LYTHI ON	30C20700
064 0	3684	DC	/3684		30C2O710
065 0	2156	DC	/2156		30C20720
D66 0	6222	DC	/6222		30C20730
067 0	769E	DC	/769E		30C20740
068 0	2152	DC	/2152		30C20750
069 0	7600	DC	/7600		30C20760
	FFFF	DC	/FFFF		30C20770
D6A 0	FFFF	, UC	/FFFF		30C20780
	0497	4 (1) [0 0)	40434	SENSE ERR	30C20790
06B 0	9A36	A SNER DC	/9A36	SENSE EKK	30C20800
0 38C	769A	DC	/769A		30C20810
D6D 0	3621	DC	/3621		
06E 0	3662	DC	/3662		30C20820 30C20830
D6F 0	6206	DC	/6200		30C20840
D70 0	FFFF	DC	/FFFF		30C20850
	0005	\$ 4 Thurs Oc	10335	HAS -INVALD CHANNEL CO	
D71 0	923E	A INVC DC	/923E	WAS -INVALD CHANNEL C	30C20870
072 0	9A21	DC	/9A21		30C20880
073 0	2184	DC	/2184		30C20890
074 0	2276	OC .	/2276		30C20890
075 0	863E	DC	/863E		
D76 0	5E32	DC	/5E32		30C20910 30C20920
077 0	211E	DC	/211E		30C20920 30C20930
78 0	263E	DC	/263E		30C20930 30C20940
79 0	7676	DC	/7676		30C20940 3CC30950
7A 0	365E	DC	/365E		3GC20950 30C20960
78 0	211E	DC	/211E		30C20960 30C20970
7C 0	5232	DC	/5232		30C 20970
70 0	3600	DC	/3600		30C20980
)7E 0	FFFF	DC	/FFFF		30020990
		4.00.00		1457 00-	30021000
7F 0	095E	ALOP DC	/0958	LAST OP-	30C21010 30C21020
0 080	3E9A	DC	/3F9A	en de la companya de La companya de la co	
0 180	9E21	DC	/9E21	· · · · · · · · · · · · · · · · · · ·	30021030
082 0	5256	OC	/5256		30C21040
83 0	8421	OC :	/8421		30C21050
0 88	FFFF	DC	/FFFF		30C21060
		*		6 10 D	30C21070
085 0	7662	ANRDY DC	/7662		30C21080
0 880	32A6		/32A6		30C21090
0 780	FFFF	DC	/FFFF		30C21100
TE	02JAN66		140F99	15NOV66 03APR67	PROG ID 030C-2
NO.	415490	4154908 4.1	L5490C	419643 419643D	PAGE 16

DATE EC NO.	02JAN66 415490	0 1MAY66 4154908	01JUL66 415490C	15NDV66 419643	03APR67 419643D	PROG ID
CDE2 1		DC	PMG07			30C21780
00E1 1	0E51	DC	PMG22	181 BU		30C21770
ODDF 1 ODEO 1	OE4D OE4F	DC	PMG20 PMG21			30C21750 30C21760
00 DE 1	0E4B	DC DC	PMG19			30C21740
00 D D 1	0E30	DC	PMG11			30021730
ODDC 1	0E21	DC	PMGBI			30C21720
00 DB 1	0E2A	DC	PMG09			30C21710
ODDA 1	OE2D	DC	PMG10			30C21700
00 D9 1	0E0E	DC	PMG06			30C21690
00 D 8 1	0E02	DC	PMG05			30C21670 30C21680
00 D6 1 00 D7 1	ODFC ODFF	DC DC	PMG03 PMG04			30C21660 30C21670
00D5 1	ODF2	DC	PMG02			30C21650
00 D4 1	ODEC	DC	PMG01			30021640
0003 1	0E37	DC	PMG13			30C21630
00D2 1	0E33	DC	PMG12		•	30021620
00D1 1	0E30	DC	PMG11			30C21610
00D0 1	0E3F	DC	PMG15			30C21600
ODCE 1 ODCF 1	0E44 0E47	DC DC	PMG16 PMG17	PRI	ITER MESSAGE TABLE	30C21580 30C21590
mrs 1	0544	PMTAB DC	DMC14	0014	TED MESSAGE TABLE	30C21570
ODAE	0020	BUF BSS	32	PRI	NTER MSG BUFFER	30C21560
		*				30C21550
		*****			****	30C21540
		*			FER AND TABLE	30C21530
	•	******	******	*******	*****	30C21520
ODAD O	FFF	*	/			30C21500 30C21510
ODAD O	9AA6 FFFF	DC DC	/9AA6 /FFFF			30C21490 30C21500
ODAB O	211A	DC	/211A			30021480
ODAA O	1636	DC	/1636			30021470
ODA9 O	223E	DC	/223E			30C21460
0 8A 00	6262	DC	/6262			30C21450
00 A 7 0	1E3E	DC	/1E3E			30C21440
00 A 6 0	2184	ACBSY DC	/2184	CAR	RIAGE BSY	30021420
UU AD U	FFFF	*	/rrr			30C21410 30C21420
0DA4 0 0DA5 0	769E FFFF	DC DC	/769E /FFFF			30C21400 30C21410
00 A 3 0	6222	DC	/6222			30021390
00 A2 0	2156	DC	/2156			30C21380
ODA1 O	629E	DC	/629E			30C21370
00 A 0 0	9E3E	DC	/9E3E			30C21360
009F 0	219A	DC	/219A			30021340
0090 0 009E 0	C421 9E52	DC	/0421 /9E52			30C21340
0090 0	7621 C421	DC DC	/7621 /C421			30C21320 30C21330
0D9B 0	2152	DC	/2152			30C21310
00 9A 0	6276	DC	/6276			30021300
0099 0	9EB2	DC	/9EB2			30C21290
00980	8141	DC	/8141		ON O TO START PRINT	30C21280
0097 0	3E62	DC	/3E62			30C21270
0096 0	1E26	DC	/1E26			30C21260
0095 0	6221	DC	/6221	•		30021250
0093 0 0094 0	F421 1252	DC DC	/F421 /1252	4.5		30C21230 30C21240
00920	84FC	DC	/84FC			30021220
0091 0	21E4	DC	/21E4	8-15	FOR CHAR	30021210
0090 0	525E	DC	/525E			30C21200
008F 0	211E	DC	/211E			30C21190
008E 0	5262	DC	/5262			30C21180
00800	2112	DC	/2112			30021170
008800	21FC 84D4	DC DC	/21FC /84D4			30C21150 30C21160
00 8A 0	9A92	DC	/9A92			30C21140 30C21150
0089 0	9E21	DC	/9E21			30C21130
0 8800	9A36	ABSW DC	/9A36	SET	SW 1-7 TO COL	30C21120
		•				30C21110

ATE 02JAN66 01MAY66 01JUL66 15NOV66 03APR67 PROGID C3OC-2 NO. 415490 415490B 415490C 419643 419643D PAGE 16A

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MAINTENANCE D	IAGNOSTIC PROC	RAN FOR TH	E 1130 SYSTEM	PART NO. 2191220 PAGE 17	IBH HAI	NTENANCE D			THE 1130 SYSTEM	PART NO. 2 Page
PRINTER FUNC	TION TEST				1132 PR	INTER FUNCT	TION TEST			
							in in the second of the second	r i s As <u>aile.</u>		30C22470
1 0E53 1 0E55	DC DC	PNG24 PNG25		30C21790 30C21800	0E20 0	FFFF	DC •	/FFFF		30C22480
1 0557	DC	PMG26		30C21810	0E21 0	C9D5	PMG81 DC	/C9D5		30C22490
1 0E59	DC	PMG27		30C21820	0E22 0		DC	/C 9E 3		30C22500
1 0E3A	DC	PMG14		30C21830	0E23 0 0E24 0		99 20	/C9C1 /D3C9		30C22510 30C22520
1 0E49 1 0E33	DC DC	PMG18 PMG12		30C21840 30C21850	0E 25 0		DC	/E9C5		30C22530
1 0E37	DC	PMG13		30C21860	0E 26 0		DC	/0000		30C22540
1 0E27	DC	PMG08		30C21870	0E27 0		PMG08 DC	/D9E3	RTS	30C22550 30C22560
	•			30C21880	0E28 0 0E29 0		DC DC	/F800 /FFFF		30C22570
0 D9E3	PMGO1 DC DC	/D9E3 /F100	RT1 EMIT	30C21890 30C21900	0629 0	r,r,r	*	7111		30C22580
0 F100 0 0000	DC	/0000		30C21910	0E2A 0	D9E3	PMG09 DC	/D9E3	RT9	30C22590
0 C504	DC	/C5D4		30C21920	0E 2B 0		DC	/F900	$(\underline{\beta}_{ij})^{-1} (\mathbf{w}_{ij} + \underline{\beta}_{ij}) = (\mathbf{w}_{ij} + \underline{\beta}_{ij} + \underline{\beta}_{ij}) + (\underline{\beta}_{ij} + \underline{\beta}_{ij} + \underline{\beta}_{ij} + \underline{\beta}_{ij}) + (\underline{\beta}_{ij} + \underline{\beta}_{ij} + \underline{\beta}$	30022600
O C7E3	DC	/C9E3		30C21930	OE2C O	FFFF	DC •	/FFFF		30C22610 30C22620
0 FFFF	DC	/FFFF		30C21940 F 30C21950	- 0E 2D 0	D9E3	PMG10 DC	/D9E3	RTA	30C22630
O D9E3	PMGO2 DC	/D9E3	RT2 SCAN CHECK	30C21960	0E2E 0	C 100	DC	/C100	-	30C22640
0 F200	DC	/F 200		30C21970	0E 2F 0	FFFF	DC	/FFFF		30C22650
0 0000	DC	/0000		30C21980	0E30 0	E 20 E	PMG11 DC	/E3C5	TEST	30C22660 30C22670
D E2C3	DC DC	/E2C3 /C1D5		30C21990 30C22000	0E31 0		DC	/E2E3	1631	30C22680
0 C1D5 0 0000	DC	/0000		30C22010	0E32 0		DC	/FFFF		3 CC22690
0 C3C8	DC	/C 3C 8		30C22020		.da	•		7	30C22700
C5C3	DC	/C 5C 3		30C22030			PMG12 DC DC	/E2D7 /C1C3	SPACE	30C22 710 30C22 720
0 0200	DC	/D200		30C22040 30C33050	0E34 0 0E35 0		DC	/C500		30C22730
FFFF	DC	/FFFF		30C22050 30C22060	0E36 0		DC	/FFFF		30C22740
0 D9E3	PMG03 DC	/D9E3	RT3	30C22070			•	5 ·		30C22 750
0 F300	DC	/F 300		30C22080	0E37 0		PMG13 DC	/E2D2	SKIP	30C22760 30C22770
O FFFF	DC	/FFFF		30C22090	0£38 0 0£39 0		DC DC	/C9D7 /FFFF		30C22780
O D9E3	PMG04 DC	/D9E3	RT4	30C22100 30C22110	6.57 0			,,,,,		30022790
0 F400	DC	/F400		30C22120	0E3A 0		PMG14 DC	/C 3C 8	CHANNE L	30C22800
O FFFF	DC	/FFFF		30C22130	0E3B 0		DC	/C 1D5		30C22810 30C22820
	*	10053	OVE DIDDLE DATTEDN	30C22140	0E3C 0 0E3D 0		DC DC	/D5C5 /D300		30C22830
0 D9E3 0 F500	PMG05 DC DC	/D9E3 /F500	RT5 RIPPLE PATTERN	30C22150 30C22160	0E3E 0		DC	/FFFF		30C22840
0 0000	DC	/0000		30C22170			•	14 y		30C22850
0 D9C9	DC	/D9C9		30C22180	UE 3F U		PMG15 DC	/60D7 /D9C9	-PRINTER	30C22860 30C22870
0 D7D7	DC DC	/D7D7 /D3C5		30C22190 30C22200	0E40 0 0E41 0	D9C9 D5E3	DC	/D5E3		30C22860
0 D3C5 0 0000	DC	/0000		30C22210			DC	/C 5D9		30C22890
0 D7C1	DC	/D7C1		30C22220	0E43 0	FFFF	DC	/FFFF		30C22900
0 E3E3	DC	/E3E3		30C22230	0E44 0	D4C4	PMG16 DC	/D6C6	OFF	30C22910 30C22920
0 C509	DC DC	/C5D9		30C22240 30C22250			DC	/C600		30C22930
0	DC	/D500 /FFFF		30C22260	0E46.0		DC	/FFFF		30C22940
	•			30C22270	1_11	2425	*	10.400		30C22950
0 D9E3	PMG06 DC	/D9E3	RT6 ALL CHARACTERS	30C22280 30C233390	0E47 0 0E48 0		PMG17 DC	/D6U5 /FFFF	ON	30C22960 30C22970
) F600	DC DC	/F 600 /0000		30C22290 30C22300	UC 48 U	erre	*	/FFFF		30022960
0000 0 C1D3	DC DC	/C 1D3		30C22310	0E49 0	E3D6	PMG18 DC	/E 306	10	30C22990
D300	DC	/0300		30C22320	0E 4 A 0	FFFF	DC DC	/FFFF		30C23000
0000	DC	/0000		30C22330	AF 4.0.0	E100	9 MC 19 DC	/F100	1	30C23010 30C23020
C3C8	DC DC	/C 3C 8		30C22340 30C22350	0E4B 0 0E4C 0		PMG19 DC	/FFFF	1	30C23020 30C23030
C1D9 C1C3	. DC DC	/C 1D9 /C 1C3		30C22360	7.5 CM		* :			30C23040
E3C5	DC DC	/E 3C5	$\{x_i\}_{i=1}^n$	30C22370	0E4D 0	-	PMG20 DC	/F200	2	30C23050
D9E2	DC	/D9E2		30C22380	0E4E: 0	FFFF	DC	/FFFF		30C23060 30C23070
FFFF	DC	/FFFF		30C22390 30C22400	0E4F 0	F 300	PMG21 DC	/F 300	3	30023080
D D9E3	PMG07 DC	/D9E3	RT7 STRESS	30C22410	0E 50 0		DC	/FFFF	-	30C23090
0 6763 0 F.700	DC	/F 700		30C22420		****	•			30C23100
0 0000	DC	/0000		30C22430	0E51 0		PMG22 DC	/F400	4	30C23110
0 E2E3	DC	/E 2E 3		30C22440 30C22450	0£52 0	rrr	DC.	/FFFF		30C23120 30C23130
0 D9C5 0 E2E2	DC DC	/D9C5 /E2E2		30022450			•			30C23140
,	, DC	,								•

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0 F		PMG 24		/F600	6	30C23150		Ć.		CROSS RE	FERENCE	LISTING	
O FE	:FF	•	DC	/FFFF		30C23160 30C 2 3170					VALUE	REFERENCES	
0 F9		PMG25	DC ·	/F900 /FFFF	9	30C23180 30C23190		ŧ			OCFA OD88	OA9D OBAB	
				*		30C23200		,		ACBSY	ODA6	OAB 9 OAB 2, OAB 6	
O FI		P MG 26	DC DC	/F1F2 /FFFF	12	30C23210 30C23220				ADNTO	0D4C 0D20	OAAB	
0 F3	JE Q	* PMG27	DC.	/F3F9	39	30C23230 30C23240					0D14 0D0A	OAAO OA9E, OABB	
0 F		•	DC	/FFFF		30C23250 30C23260					0D02 0D29	0AA3 0AA4	
09	28	•	END	BGIN		30C23270		;		AE MT	0D38	OAA 6	
		•		1 v	·						0D3F 0D10	OAA 9 OAA D, OAAF	
	•							•			0D71 0D7F	OAB 4 OAC F	
								,		AL PHA	OAD6	OABD	two states
				•				(0D48 0D58	OABO OAAE	
				* *				C			OD51 OBF6	OAAC O5F7, OC58, OC5C, OC78, OC81	A A A A A A A A A A A A A A A A A A A
										AN DOR	OBF8	05F 5, 0C7F	
	7.	•		1,8				£			0D0D 0D85	0A9F 0B6D	
											0D5 E 0D1 7	08E9 0AAA	
								C	•	AS DSW	OCF1	0A98	
				+ 4 +							0043 0058	OAB 3 0927	All Control of the Co
								•			0D6B 0D54	0AB7 090D	
				en de la companya de La companya de la co	•					ASPIN	0D62 0D1B	OBBO OAA1	The second secon
				Y						AHAS	OCEL	0A9 A, 0A9C, 0AA2, 0AA8	
			1.					(09CF 09EE	06E 9, 06FC , 09DF , 09EC 06DC , 0708 , 09E 9	
											09ED J906	0902,09DC 0909	
		•						C		A1 20	09E1	090D	
	taliji Burto							_			09E2 0ADF	09EB OAE8, OAFO, OBOA, OBOB, OBIF, OB20, OBA8, OBB8	
				1. M.	•			C			0160 05E8	0000,05E8 0E58	
				*				e		BLANK	OBEC	09A5, 0BE6, 0BEA	
								ζ.,	•	BUF -	OBA4 ODAE	0864, 08A0 0955, 09C9, 0CAA	
					grade for a world with a con-			7			OADA OCBA	0A5E 06DE,098D,0C62,0C91	
										CHARC	0C06 08A9	0C71,0C8F 0873,0882	
				Marie de la Carlo	· · · · · · · · · · · · · · · · · · ·					CHMSG	O7CE	073C, 07B2, 07E4, 07EB, 07ED, 080D, 0819, 083A,	084E
		•									07E9 07EB	07E6 07CF• 0A7E	
						e de la companya de l			-	CHNUM	0A65 07EF	OASC OTEO	
,										CHWAS	OAE3	0900,0902,0820	
				1.00							07 C6 078F	071 E, 07A4, 07A7, 07D8, 07DA	
	* · · ·				•		•	··		CH2SQ	07C5 07C4		
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	. (*) 5 - (*)			¥ Tute e						CH9SC	07C0	0886, 0C4F, 0C73, 0C9D	
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			•							CK EN2	0C6D	0C65, 0C97	•
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                   OC6F
CKEM4
        .0C73
                   0060
CKEM5
        OC75
                   OC5 F
CKEP6
        OC8F
                   OAF 5, 0B 26, 0C4E, 0C6B, 0C7A, 0C9B
CKESW
        OC07
CLEAR
        09BA
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        09BF
                   090,2
CL 20
        0909
                   09CC
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                   0858,0818
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        0604
                   0602
CN2G
        060B
CN 3.0
        0611
                   0606
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        0869
                   0838,0843,084C,0855,085A,0861
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        OADE
DS WW
        OADD
                   08DF, 0A7B, 0B09, 0B3F
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        OBID
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                   06DA, 0706, 0880, 098F, 09E7, 08F2, 0C51, 0C57, 0C5A, 0C64,
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        OCOA
                   0C95,0CAC
ENTCT
                   05F3,0C75,0C84
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        OADC
                   093E, 0893, 0C54, 0C6D, 0C8C
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        OBF4
EMTHS
        OADB
                   OC5 2
                   0000,0000,0000,060F
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                   09F 2
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        OAD7
ERM4
        OAD8
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                   0A31
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        0A51
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        0A56
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ERR13
        OA6D
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        OABB
                   0905, 0A90
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                   08E 4, 0A97
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        0A02
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        DAGC
                   OBOE
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        0A16
ERR4
        OALA
                   0A15
                   0A33, 0B24
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        OALE
ERR5X
        0A33
                   0A28, 0A50, 0A55, 0A5A
ERR6
        0A35
                   0A3B.0C78
        QA3D
                   0A43,0C69
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FRRA
        0A45
                   0A4A, 0C99
ERR9
        OA4C
                   OA2B
ETYPE
        OABA
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                   0A62, 0A71, 0A7D, 0A88, 0A3F, 0A96, 0ACC
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        OACB
                   OAC 2
                   OAC 5
FTYP2
        OACC
                   08DB, 090B, 091B, 0923, 0925, 0940, 0A10, 0B74, 0B84, 0B85,
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        OBFA
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                   0862
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        OBJA
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                   0633,064A,06A1,06D6,0704,083F,087E,08D6,0989,09E5
IDLE
        08D1
        OAE 1
                   0042,0049
IDSW
        0174
                   0000
ILO
                   0000,05FD
ILl
        0184
IL 2
        019A
                   0000
IL3
        OLAA
                   0000
        OIBA
IL4
                   0628,063C,0652,0688,06B0,06CA,06F5,0716,0780,07F7,
INTLZ
        OBAD
                   0825,085D,0888,08C2,08C4
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```
OSBE
                    OBBC
INT1
INT2
         08C2
                    08BA
         0711
                    077C, 0783, 07FB, 0828
IN89A
IOUT
         0C35
                    OC25, OCB7
                    0C34, 0C8E
I TUOI
         0C38
                    0871,088A,0C20,0C36,0C77
IDUT2
         0C3C
IOUT3
         OC4B
                    0C40
                   0713,077E
189AX
         0775
                    0C2A, 0C2F, 0C45
KE FOO
KF F 00
         OBFF
                    0765,083D,0C5E
         OAE5
                    0A85, 0B2C
KOOFF
                    ORDE
KOOOI
         0001
KO 0 3 0
         08A7
K1 000
         0989
                    0913,0921,092D
         0009
                   08A5
K1 200
                    OAEE, OBB7
K7F00
         0000
                    0728, 07FD, 082A, 0895, 095D, 099B, 0CA7
KB 000
         0984
                    0687,06C1,06F9,070C
LINES
         0666
                    0635,064C,0670,06A6,06BC,06EE,070A,075C,07BB,081B,
LOCK
         .09EF
                    0851,089D,09F5
LOG
         0163
                    0000,0860,0848,085D
LOGBY
        0167
                    062E, 0642, 0657, 068D, 0688, 06CF, 06FA, 072F, 078E, 0800,
         OACB
LOOP
                    082 D, 0876, C88 2, 09F 7
LPCNT
         06C8
                    062C, 0637, 0640, 064E, 0661, 0672, 0697, 06A8, 06D2, 06E5,
                    071B,0761,0785,07BA,0879,0888,0984,0996
LRTN
         0627
                    061B
                    074A, 074D, 07DC
         0700
LTSEC
                    0618,0869, CAFE, 0801, 084F, 0864, OC3A
ML SCF
         05E5
MSCAN
         OC9F
         09B8
                    097A,09C6,0BC6
MSGSW
MS G 1
         DA9A
                    O9FC
         DAAC
                    0A53
MSG10
         DAAE
                    0A58
MS G 1 1
         OABO
                    0A61
MSG12
MS G13
         OAB2
                    OATO
         OAB4
                    DATE
MSG14
MSG15
         0A86
                    0A87,0A85
         OABE
                    0A95
MS G 17
        QA9C
                    0406
MS G 2
MSG3
         OA9E
                    OAOE
MS G4
         OAAO
                    OALB
MSG5
         OAA2
                    0A22
         OAA4
MSG6
                    0A38
         OAA6
                    0440
MS G 7
         DAAB
MSG8
                    0448
MSG9
         OAAA
                    OA4E
MS 1
         OCA4
                    OCB 6
MS 2
         OCA9
                    OCA 4
MS 3
         OCB3
                    OCAE
ND49
         06C7
NO 50
         06C9
NRTN
         0626
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                    0904, 0A72
         0986
OPMSW
        OAC6
                    OACC, OACT, OAF 2
                    08E8,090F,0929,0882
DP SW
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         OBF7
OREM
                    OC58,OC59,OC5D
PC OLM
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                    0870,088C
PI D
         05DC
                   05EA
PINT
         0883
PIRT
         0870
                    05FB, 0C4B
PII
         0896
                   OBSC
PI 2
         OBA 1
                    089 D, OC 2D
PI 3
         OBBC
                    0889,08DA
PI 4
         OBC5
                    OBB E, OBEB
PI5
         OBCF
                    09A7. 0BE4
PI 6
        OBD1
                    09A9, 0BE5
PI7
         OBDE
                    08D7
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PHGOL	ODEC	0D04
PMG02	ODF2	0DD5
PMG03	ODFC	0006 ··
PMG04	ODFF	0007
PMG05	0E02	0008
PMG06	OEOE	000 9
PMG07	OELA	ODE 2
PMG08	0E27	ODE 8
PHG09	OEZA :	0008
PMG10	0E2D	ODDA
PMG11	0E30	0DD 1, 0DDD
PMG12	0E33	ODD 2, ODE9
PMG13	0E37	ODO3. ODEA
PHG14	OE3A	ODE 7
PMG15	OE3F	0DD 0
PMG16	0E44	ODC E
PMG17	0E47	ODCF
PMG18	0649	ODE 8
	-,	
PMG19	OE4B	ODDE see all a suit and a see all a see a se
PMG20	0E4D	ODDF Control of the c
PHG21	OE4F	ODEO
PHG22	0E51	ODE1
PHG24	0E53	00E3
PMG25	0E55	-
PHG26	0E57	0 7E 2. ODE5
PHG27	DE59	ODE 6
PMG8I	0E21	3000
PMSG	0946	066D, 06A3, 072C, 0789, 07E7, 08BD, 094E, 097E, 0980
PMS1	0958	0957, 0965
PHS2	0962	0971.0973
PHS3	0970	096C
PHS4	0974	094A, 0958
_		0744,0750
MS5	097E	
PHTAB	ODCE	095F
PR COM	08D8	08C D, 08D5, 08F 5, 097C
PRC1	0800	0 8 E 6
PRC2	08E7	08E 2
PRINT	0806	06EC, 06FF, 089B, 08CF, 09AE
RAD	05DE .	0615
RBSWS	08A0	0863
RDEMT	OBF2	OB63
RDYMK	0868	0842
RDY1	OB3C	084D
RDY2	084D	0845
RE ADY	0 83 9	0884, 0840
RID	0500	05EC, 0604, 060A, 060B, 060D, 0611, 0814
RI DCK	0618	0605
RI PL	0982	068 A, 0980
RI PL 1	0983	0995
RI PL2	0986	0998
RI PL3	098B	0684,068E,09A1
RI PL4	099B	099 1. 099A
RI PLS	09A5	099 F
ROKB	OIBC	0000
RQTY	0188	0000
RT NON	061C	060E
RTNSW	0165	0616
-	081 F	
RTRN		0C30
RTRNS	0C04	087F, Ou , OC35
RTRN1	0B37	OB31
RTTBL	061D	0613,0616,061C
SAVE	0982	0954,0959,095E
		0665.0666.069A.069B
SA VE3	0687	
SCNCT	OBFO	08D9, 0888, 08BC
SCNT	0686	0667, 066A
SENSE	OB1B	0735,0777,08DD,08FE,0932,0AED,0B08,0828,0B3C,0B56
		0BB5
SE Q SM	0767	072A, 0743, 075E, 0774, 07D7, 07DD, 07DF
T 430	0101	A. P. M. A. L. M.

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SHFT2	07CB	0726, 0751, 0753, 075A
SHIFT	07CA	0724, 0748, 0754, 0755, 075 8, 0790, 079C
SKENT	0939	0920, 0C16
SKINT	ОСОВ	0881,0890,0895,0898,08A0,08C4,08E8
SKINI	0C16	0C14
SK I N2	0C19	0C15,0C22
SK I N3	OCIC	0C18
SKIP	0919	0798,0814,0849,0935
SKPTO	0938	091A, 0C12, 0C1E
SK P1	0932	0937
SPACE	08F7	0668,0733,0775,0787,0802,082F,0886,0887,08C0,08C1,
J. AUL		08CE, 0917
SPCSW	0002	0 AE B, 0B9B, 0BA 1, 0C2C
SPCSX	0003	069C, 09BD, 0AE 9, 0AF7
SP C1	0909	08F8
SPINT	0C23	0C0D
SPINI	OC2F	
SPIN2	CC32	0C18
SRSET	OBEF	087C
START	0161	0000,0619,0803,0812,0816
STCAR	0985	0928
STM	OB6A	084 A. 08 SE
STOP	093A	0731,0793,080F,08AE,08F8,0931,0944,094C,0ABE
STPCA	OBF1	0C19
STPCT	0C05	088 E, 089F, 08A 4
STPPT	OBED	0938,0894,0085
STPRT	0983	08F1
STRT	05EB	05E 3, 05E4
STSPA	OBF 5	0911,0884
SVKB	OIBD	
SH O	05DF	0947, 09F0
SW 1	05E0	0601,0609,0810
SH 2	05E 1	05ED, 0804, 083 1, 08CA
SM3	05E2	05F A, 08C7
SH 8 9A	077F	05F0, 0712, 0715
TABLE	OAD3	OABB, OABC, OACA
TBDSW	OBIC	08EF, 0942, 0AE 7, 08 92, 08A6, 0C8A
TEMP	OCB9	OCA 9, OCBO, OCB 3
TE MPB	08A2	088F, 0891, 0893
TE MP8	07C8	0767,076E,0770,078D,07AB,07AE,07D1,07EA,07FF,0809,
	0007	0811,081D,081F,082C,0836,0845,0853,0856,0A78
TERM	09B7	0964, 0967
TSTA	0825	0626 0627
TS T B TS T 1	085D 0628	061D
TST2	063C	061E
TST3	0652	061F
TST4	0688	0620
TST5	06B0	0621
TST6	06CA	0622
TST7	06F5	0623
TSTA	0780	0624
TS T 9	07F7	0625
TOAA	082F	0859
TOAB	083A	0834
TOAC	0853	0838
TOBA	0863	0867, 0887, 089F
TOBB	086 D	0865
TOBC	0878	088A
TOBD	0880	
TOBE	088C	0883
TOBF	089A	0874, 0888
TOTA	0630	0639
TOZA	0644	0650
TO3A	0659	0677
TO3A1	0666	0674
TO 3B	066F	065D

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TO4A1
        069B
                    O6AA
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                    0693
         0686
                    06C 3
T05C
         06BA
TO 5D
         068E
T064
         06CD
                   06E 4, 06F2
06E 7
06C E, 06F0
T068
         06D1
        06D3
T06C
T06D
         0628
         06E9
                    06E0,06E8
TO6E
TO 7 A
         06FC
                    070E
TOBA
         072F
                    0763
                    0756
TOBAL
        07-8
TOBAZ
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                    074F
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                    075F
                    0723,0760,0771
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         0768
T08E
        0790
                    07BC
T08F
        0792
                    07B7
                   0792,0784
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TO9A
         0802
                    0821
T098
         0800
                    0807
T09C
        0810
                    080B
T3CTL
        0679
                    0656,0659,065B,065E,0675,068C,068F,0691,0694,06AB
                   073F, 0741, 0764, 080A, 0837
05E E, 08F3, C8F9, 0915, 092F, CA18, 0837
        O7CD
VC HNL
HAIT
        OAE6
WAIT1
        OAFC
STIAM
        0801
WAIT3
        0805
        0810
                    0868,0800,0851,0866
WALT4
                   0737, 0779, 079E, 07AF, 0816, 084B, 0A83, 0B2E, 0B7E, 0C0B, 0C1C, 0C23, 0C41, 0C48
WAS
         OBEE
        081 E
MCNT
                    OAF8,0805,0878
                    088E
         08A6
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1442 READER/PUNCH FUNCTION TEST

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11	30 DIAGNOSTIC MONITOR II.	

2.2 EQUIPMENT PREREQUISITES

THE FOLLOWING EQUIPMENT IS REQUIRED.

- A. 1131 CENTRAL PROCESSING UNIT (CPU) WITH PROGRAM LOAD FROM CARD OR PAPER READER.
- B. 1442 CARD READ/PUNCH MOD 6 OR 7.
- C. AT LEAST 1400 WORDS OF AVAILABLE CORE STORAGE.

xxxxxxxxxx

OPERATING PROCEDURE

THESE OPERATING PROCEDURES APPLY TO SINGLE PROGRAM OPERATION ONLY. FOR OVERLAP OPERATION REFER TO SECTION 3.2.3 OF THE 1130 DIAGNOSTIC MONITOR II DOCUMENTATION.

3.1*** PROGRAM LOADING

STANDARD MONITOR LOADING PROCEDURES APPLY

THESE PROCEDURES ARE SUMMARIZED HERE. SEE DM USE PROCEDURE FOR DETAILS.

- 1. SET FIRST TYPEWRITER TAB 20 CHARACTERS FROM LEFT MARGIN.
- 2. SET BIT SWITCH 15 OFF LOAD AND GO

ON - TO SPECIFY OPTIONS BEFORE RUNNING.

IF HALTED AFTER LOADING, SELECT PROGRAM OPTIONS THEN TURN OFF HALT SWITCH OR FOLLOW NORMAL RESTART PROCEDURE (SECTION 3.5).

- LOAD DIAGNOSTIC MONITOR AND THIS PROGRAM.
- SELECT PROGRAM OPTIONS, IF DESIRED.
- 3.2*** PROGRAM OPERATION.
- 3.2.1 PROGRAM CONTROL OPTIONS FUNCTION 0
 - 1. SET SWITCHES 0-7 TO 01.
 - 2. SET SWITCHES 8-15 AS DESIRED.

SW	FUNCTION	en de la companya de La companya de la co
8	RESTART	
9	SINGLE CYCLE CONTROL AND ROUTINE START	MESSAGE
10	LOCK ON FUNCTION	* .
11	LOOP PROGRAM	
12	LOOP ON ERROR	
13	BYPASS ERROR PRINTOUT	
14	HALT ON ERROR	
15	HALT	

3. PRESS INT REQ KEY ON CONSOLE.

3.2.2 ROUTINE SELECTION - FUNCTION 1

THE SELECTED ROUTINE WILL LOOP UNTIL A NEW ROUTINE IS SELECTED.

- 1. TO SET ROUTINE SELECTION
 - A. SET SWITCHES 0-7 TO 41.
 - B. SET ROUTINE NUMBER IN SWITCHES 12-15.

RTN	DESCRIPTION

1 2 3 4 5	PUNCH AND FEED READ ROTATE PATTERN PUNCH 40 COLUMNS PUNCH FLIPPED PATTERN READ FLIPPED PATTERN CLUTCH TEST	•	NORMAL ROUTINES- THE PROGRAM STARTS WITH ROUTINE 1, RUNS EACH ROUTINE IN SEQUENCE THEN TERMINATES AFTER ROUTINE 6.
7 × 8	 PUNCH FROM SWITCHES GANG PUNCH	:	OPTIONAL ROUTINES THESE ROUTINES RUN ONLY IF SELECTED.

- * = REFER TO SECTION 3.2.3 FOR SPECIAL INSTRUCTIONS.
- C. PRESS INT REQ KEY ON CONSOLE.
- 2. TO RESET ROUTINE SELECTION SET AS IF SELECTING ROUTINE ZERO.

3.2.3 OPTIONAL CONTROL

1. SELECT CLUTCH DELAY

IN THE CLUTCH TEST (RTN 6) THE DELAY BETWEEN START READ COMMANDS CAN BE SPECIFIED BY THE SWITCHES. TO DO THIS, SET SWITCHES 0-7 TO 81, 8-15 FOR THE DESIRED DELAY, THEN PRESS THE INTERRUPT REQUEST KEY. EACH BINARY INCREMENT SET IN THE SWITCHES INCREASES THE DELAY BY 8 MILLISECONDS.

2. PUNCH FROM SWITCHES

ROUTINE 7 WILL PUNCH ALL CARDS WITH THE PATTERN SET IN SWITCHES 0-11. AFTER THE ROUTINE IS SELECTED, FOLLOW INSTRUCTIONS IN THE SET UP MESSAGE. THE NUMBER OF COLUMNS TO BE PUNCHED CAN BE SPECIFIED BY A SWITCH ENTRY WITH THE SWITCHES SET TO 81XX WHERE XX EQUALS THE NUMBER OF COLUMNS IN HEX.

3. MODIFY PUNCH DATA

ROUTINE 9 WILL READ IN ONE CARD AND REPLACE THE PUNCH DATA TABLE WITH THE DATA PATTERN PUNCHED IN THAT CARD. THE PROGRAM WILL THEN AUTOMATICALLY RESTART FROM ROUTINE 1. *****

3.3*** PROGRAM HALTS

1442 READER/PUNCH FUNCTION TEST

3.3.1 NORMAL HALTS

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

.HALT NO. .(B REG).	DESCRIPTION	•	RESTART .
. 3001	PROGRAM STOP OR ADDRESS	STOP .	PRESS START
3002	HALT ON ERROR	•	DISPLAY MODE-PRESS START. RUN MODE-PRESS START.
	xx		

3.3.2 ERROR HALTS

.HALT NO.	DESCRIPTION	RESTART ACTION
. 30F1	CHECK SUM ERROR ON FIRST	RELOAD
. 30F2	READER DSW ERROR WHEN LOADING LOADER	RELOAD
. 30F3 .	CARD 2 OF LOADER DID NOT LOAD	RELOAD
30F4 .	CAN NOT CLEAR CORE - DUE TO . ERROR IN ADDRESSING UPPER . CORE.	
30F5 .	READER CHECK WHEN LOADING MONITOR OR TEST PROGRAM	NPRO THEN PLACE CARDS RUN OUT IN FRONT OF REMAINING DECK AND PRESS START.
. 30F6 .	MONITOR DID NOT LOAD	RELOAD
30F7	CHECK SUM WHEN LOADING MONITOR	RELOAD
. 30F8 .	READER NOT READY	MAKE READER READY
. 30F9 .	INVALID INTERRUPT WHICH WILL . NOT RESET	PRESS RESET AND START
30FA .	CONSOLE PRINTER HANG UP - BUSY WILL NOT GO OFF	FIX THE CONSOLE PRINTER
	жжжжжжжж	

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1442 READER/PUNCH FUNCTION TEST

3.4 PROGRAM TERMINATION

IF LOOP PROGRAM HAS NOT BEEN SPECIFIED THE PROGRAM WILL TERMINATE AT THE END OF ROUTINE 6. ROUTINE 7,8 AND 9 WILL RUN ONLY IF

IF ANY ROUTINE IS SELECTED THAT ROUTINE WILL LOOP AND WILL NOT TERMINATE.

3.5*** RESTART

1. SET SWITCHES 0-7 TO 01.

2. TURN ON SWITCH 8.

3. SET DESIRED CONTROL IN SWITCHES 9-14.

4. PRESS INTERRUPT REQUEST KEY.

PRINTOUTS

ALL PRINTOUTS ARE IN THE STANDARD FORMAT.

APPNN OORR AAAA

(MESSAGE)

EPPNN OORR AAAA

(MESSAGE)

WHERE

A IDENTIFIES STATUS MESSAGES

E IDENTIFIES ERROR MESSAGES

PP IS THE PID OF THE PROGRAM CAUSING THE MESSAGE

THIS WILL BE EITHER 00 FOR MESSAGES ORIGINATED BY MONITOR OR OF FOR MESSAGES ORIGINATED BY THIS PROGRAM.

IS THE MESSAGE SEQUENCE NUMBER RR IS THE ROUTINE NUMBER AAAA IS THE ADDRESS OF THE ROUTINE

MESSAGE IS ANY VARIABLE INFORMATION

4.1 *** STATUS MESSAGES

A0000

NUM PID ADRS RELF LD XXXX XXXX XXXX XXXX

THIS MESSAGE IS PRINTED FOLLOWING THE LOADING OF ANY PROGRAM (EXCEPT MONITOR), THE MESSAGE GIVES THE LOAD SEQUENCE NUMBER, THE PROGRAM ID, THE ADDRESS INTO WHICH THE PROGRAM WAS LOADED, AND THE RELOCATION FACTOR.

A0001

SWS PID XXXX XXXX

THIS MESSAGE IS PRINTED EACH TIME A VALID SWITCH ENTRY IS READ BY THE MONITOR. THE MESSAGE CONTAINS THE SWITCH SETTING READ TOGETHER WITH THE PROGRAM ID OF THE PROGRAM INTO WHICH THE CONTENTS OF SWITCHES 8-15 WERE STORED. IF THE SWITCH ENTRY CALLED FOR HALT OF ANY PROGRAM THE WORD HALT WILL FOLLOW THE MESSAGE.

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM 1442 READER/PUNCH FUNCTION TEST

A0F00 000R AAAA

ROUTINE START MESSAGE - IF SWITCH 9, FUNCTION 0, IS TURNED ON, THIS MESSAGE WILL BE PRINTED BEFORE THE START OF EACH ROUTINE. R IS THE NUMBER OF THE NEXT ROUTINE AND AAAA IS THE STARTING ADDRESS.

A0F01 000R AAAA

LOAD. BLANKS

LOAD THE 1442 HOPPER WITH BLANK CARDS THEN PRESS 1442 START.

A0F02 000R AAAA

LOAD FROM STK2

LOAD THE CARDS IN STACKER 2 (PUNCHED BY PREVIOUS ROUTINE) IN THE 1442 HOPPER, THEN PRESS 1442 START. THIS DECK WAS PUNCHED WITH A ROTATING PATTERN. IT MUST BE LOADED IN THE SAME ORDER AS PUNCHED. THERE MUST BE NO CARDS MISSING FROM THE DECK.

AOFO3 OOOR AAAA

LOAD ANY PATTERN PLUS BLANKS

IF ROUTINE 8 - THE PATTERN IN THE FIRST CARD WILL BE PUNCHED IN THE FOLLOWING BLANK CARDS.

IF ROUTINE 9 - THE ROTATE DATA TABLE WILL BE REPLACED BY THE PATTERN IN THE FIRST CARD. THE ROUTINE WILL THEN RESTART THE PROGRAM AT ROUTINE ONE.

A0F04 0006 AAAA

LD GANG PUNCHED CARDS

LOAD ANY GANG PUNCHED DECK. THIS DECK CAN BE PUNCHED BY ROUTINE 8. THE FIRST CARD WILL BE READ AND ALL FOLLOWING CARDS COMPARED TO IT.

A0F05 000R AAAA

NRDY - PRESS 1442 START

THIS MESSAGE WILL BE PRINTED IF THE 1442 IS NOT READY FOR ANY REASON. THE PROGRAM WILL LOOP WAITING FOR READY. TO CONTINUE, CLEAR ANY ERROR CONDITIONS AND MAKE THE 1442 READY.

A0F06 000R AAAA

02JAN66

415490

FC NO.

01MAY66

415490B

LAST CARD

01MAR67

419643B

15NOV66

419643

01APR69 01MAY69

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THE LAST CARD INDICATOR WAS ON AT THE COMPLETION OF THE LAST 1442 CONTROL OPERATION. A FEED COMMAND WAS GIVEN TO RUN OUT THE LAST CARD. THE ROUTINE WILL THEN TERMINATE. IF NO ROUTINE HAS BEEN SELECTED, THE PROGRAM WILL ADVANCE TO THE NEXT ROUTINE. IF A ROUTINE HAS BEEN SELECTED, THE PROGRAM WILL RESTART THAT ROUTINE.

A0F07 0007 AAAA

SET PATT IN SW 0-11 THEN TN SW 12

THIS IS THE SET UP MESSAGE FOR ROUTINE 7. IT INSTRUCTS THE CE TO SET ANY DESIRED DATA PATTERN IN SWITCHES 0-11. WHEN SWITCH 12 IS TURNED ON, THIS PATTERN WILL BE PUNCHED. THE NUMBER OF COLUMNS PUNCHED CAN BE CONTROLLED BY A FUNCTION 2 SWITCH ENTRY WITH THE DESIRED NUMBER OF COLUMNS SET IN SWITCHES 8-15 (FOR SINGLE PROGRAM OPERATION SET SWITCHES TO 81XX WHERE XX EQUALS NUMBER OF COLUMNS IN HEX). **********

4.2 HHH ERROR MESSAGES

THE DSW IS CHECKED FOR ABSOLUTE CORRECTNESS AT ALL TIMES. IF AN ERROR IS DETECTED ONE OF THE MESSAGES BELOW WILL INDICATE THE PROBLEM. IT IS LEFT TO THE OPERATOR TO ANALYZE THE DSW FOR THE SPECIFIC PROBLEM AREA.

	THE 1442 DSW
	· • • • • • • • • • • • • • • • • • • •
BIT	
0	READ RESPONSE
0	
1	PUNCH RESPONSE
2	ERROR CHECK
3	LAST CARD
4	OPERATION COMPLETE
5	NOT USED
6	NOT USED
7	FEED CHECK AT READ STATION
8	NOT USED
9	NOT USED
10	NOT USED
11	NOT USED
12	NOT USED
13	NOT USED
14	BUSY
15	NOT READY OR BUSY

E0001

SWS INVLD XXXX

THE SETTING OF SWITCHES 4-7 DID NOT EQUAL THE LOAD SEQUENCE NUMBER OF ANY PROGRAM IN CORE.

E0003

OVR CORE

THE PROGRAM WHICH THE LOADER WAS ATTEMPTING TO LOAD EXCEEDED AVAILABLE CORE. LOADING WAS TERMINATED.

E0004

1442 READER/PUNCH FUNCTION TEST

CKSUM

A CHECK SUM ERROR WAS DETECTED WHILE LOADING A TEST PROGRAM. THIS ERROR OCCURS UNDER ANY OF THE FOLLOWING CONDITIONS.

- 1. A CARD IS MISSING OR IS OUT OF SEQUENCE.
- 2. THERE IS AN EXTRA CARD IN THE DECK.

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM TO BE THE

- 3. THE PUNCHED INFORMATION ON THE CARD IS NOT CORRECT.
- 4. DATA WAS LOST OR PICKED UP DUE TO A MACHINE MALFUNCTION.
- 5. DUE TO A CPU MALFUNCTION, THE CHECK SUM WAS NOT CORRECTLY CALCULATED.

WHEN THIS ERROR OCCURS ATTEMPT TO RELOAD THE PROGRAM.

000N XXXX

THIS ERROR WILL OCCUR IS AN INTERRUPT OCCURS, BUT THE ILSW WAS NOT CORRECT. N IS THE INTERRUPT LEVEL AND XXXX IS THE ILSW. THIS PRINTOUT WILL ONLY OCCUR IF THE INTERRUPT IS RESET BY A BOSC. NO ATTEMPT IS MADE BY THE ERROR ROUTINE TO RESET THE REQUEST BIT. _____

E0F00 000R AAAA

CARD NOT BLANK

A PRE-PUNCHED CARD WAS DETECTED BY A PUNCH ROUTINE. THIS CARD WAS NOT PUNCHED BUT WAS REJECTED. THIS CARD WILL BE FEED OUT INTO STACKER 1.

E0F01 000R AAAA

WAS S/B - STATIC DSW ERR

XXXX 0000

A BIT, IN ADDITION TO NOT READY, WAS ON IN THE DSW WHEN IT WAS SENSED BEFORE GIVING A CONTROL COMMAND TO THE 1442. USE THE ABOVE DSW TABLE TO IDENTIFY THE BIT, THEN TAKE APPROPRIATE CORRECTIVE ACTION.

E0F02 000R AAAA

LAST OP - CCCC

WAS S/B - BUSY DSW ERR

XXXX 0003

THIS DSW WAS SENSED IMMEDIATELY AFTER THE 1442 CONTROL COMMAND WAS IDENTIFIED BY CCCC WAS GIVEN. THAT COMMAND SHOULD MAKE THE 1442 BUSY AND NOT READY. NO OTHER BITS SHOULD BE ON.

E0F03 000R AAAA

LAST OP - CCCC

DSW - NO INTRPT - LEV4

NO OP COMPLETE INTERRUPT WAS RECEIVED FOLLOWING THE LAST CONTROL COMMAND, COMMAND, IDENTIFIED BY CCCC. THE COMMAND WAS RECEIVED BY THE 1442 IF AN E0F02 MESSAGE WAS NOT PRINTED.

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1442 READER/PUNCH FUNCTION TEST

WAS S/B - LEVO DSW ERR

XXXX X003

THIS DSW WAS SENSED IN THE LEVEL ZERO INTERRUPT ROUTINE. THE RESPONSE FOR THE LAST CONTROL COMMAND (IDENTIFIED BY CCCC) SHOULD BE ON, TOGETHER WITH BUSY AND NOT READY.

E0F05 000R AAAA

E0F04 000R AAAA

LAST OP - CCCC

WAS S/B - LEV4 DSW ERR

XXXX X80X

THIS DSW WAS SENSED IN THE LEVEL 4 INTERRUPT ROUTINE. OP COMPLETE BIT SHOULD BE ON. THE LAST CARD AND NOT READY BITS MAY BE ON. ALL OTHER BITS SHOULD BE OFF.

E0F06 000R AAAA

LAST OP - PUNCH

WAS S/B - PCH CK

XXXX 0000

A PUNCH ECHO CHECK OCCURRED WHILE PUNCHING THE LAST CARD. XXXX IS THE PUNCH ECHO THAT WAS READ FROM THE 1442 BUFFER REGISTER FOLLOWING THE PUNCH CHECK. ANY BIT THAT IS ON THIS WORD IDENTIFIES A DESCREPANCY BETWEEN THE PUNCH DIE ECHO AND THE DATA WHICH WAS TO BE PUNCHED IN THE COLUMN. PUNCHING IS TERMINATED WHEN THIS ERROR IS DETECTED; THUS, THE ERROR OCCURRED IN THE LAST COLUMN PUNCHED. IF PUNCHING A ROTATE PATTERN DISCARD THE CARDS PUNCHED AND RESTART THE ROUTINE.

E0F07 000R AAAA

LAST OP - CCCC

WAS S/B - ER CK

XXXX 0000

AN ERROR CHECK OCCURRED DURING THE LAST OPERATION. IF THE LAST OPERATION WAS READ OR PUNCHED, THIS MESSAGE SHOULD BE FOLLOWED BY AN E0F08 MESSAGE WHICH WILL IDENTIFY THE NUMBER OF COLUMNS PROCESSED BEFORE THE ERROR WAS DETECTED. TO CONTINUE, CLEAR ALL CARDS FROM THE 1442 THEN PRESS START. IF PUNCHING A ROTATING PATTERN TO BE READ BY THE NEXT ROUTINE, DISCARD THE CARDS PUNCHED AND RESTART THE ROUTINE.

E0F08 000R AAAA

WAS S/B - COL CNT ER

XXXXX YYYYY

XXXXX IDENTIFIES THE NUMBER OF COLUMN INTERRUPTS THAT OCCURRED DURING THE LAST OPERATION. YYYYY IDENTIFIES THE EXPECTED NUMBER OF INTERRUPTS. IF AN ERROR CHECK OCCURRED DURING THE LAST OPERATION (IDENTIFIED BY AN E0F06 OR E0F07 MESSAGE) THE OPERATION WILL TERMINATE AT THE TIME THE ERROR OCCURS. THUS, THIS ERROR MESSAGE WILL IDENTIFY THE COLUMN BEING PROCESSED WHEN THE ERROR WAS DETECTED.

E0F09 000R AAAA

WAS S/B COL - DATA ERR XXXX YYYY 000ZZ

THE DATA XXXX READ FROM COLUMN ZZ(IN DECIMAL) DOES NOT AGREE WITH THE EXPECTED DATA YYYY FOR THAT COLUMN. CHECK CARD FOR CORRECT DATA. IF DATA IS CORRECT THEN A READ ERROR OCCURRED. IF THE DATA IS NOT CORRECT, A PUNCH ERROR OCCURED. IN THE LATTER CASE, IF NO PUNCH CHECK WAS DETECTED WHILE PUNCHING THE CARD, THE PUNCH ECHO CHECK IS NOT FUNCTIONING.

E0F10 000R AAAA

LAST OP - CCCC DSW - NO INTRPT - LEVO XXXX

NO LEVEL 0 (COLUMN) INTERRUPT WAS RECEIVED FOLLOWING THE LAST CONTROL COMMAND, IDENTIFIED BY CCCC. THE COMMAND WAS RECEIVED BY THE 1442 IF ON E0F02 MESSAGE WAS NOT PRINTED.

- COMMENTS
- 5.1*** TEST PROCEDURE
- 5.1.1 TEST ORGANIZATION

TESTS ARE ORGANIZED AS FOLLOWS

- 1. INITIALIZE THE TEST
 - A. SET FOR START OF PATTERN
 - B. PRINT SET UP MESSAGE.
- 2. INITIALIZE FOR NEXT CARD
 - A. IF PUNCH TEST READ THE CARD AND CHECK FOR BLANK.
 - B. SET EXPECTED COLUMN INTERRUPT COUNT.
 - C. SET LOOP ADDRESS
 - D. CHECK DSW FOR READY
- 3. EXECUTE CONTROL COMMAND
- 4. CHECK FOR ERRORS
 - A. CHECK DSW FOR BUSY
 - WAIT FOR TIMED PERIOD TIME OUT IF NO INTERRUPT
 - C. CHECK COLUMN INTERRUPT DSW.
 - D. CHECK FOR CORRECT NUMBER OF COLUMN INTERRUPTS.
 - E. CHECK OP COMPLETE DSW.
- 5. ANALYZE ERROR DATA AND PRINT ERROR MESSAGES.
- 6. GO TO 2 ABOVE IF LOCK ON FUNCTION.
- 7. ADVANCE FOR NEXT CARD.
 - A. ROTATE PATTERN
 - B. INCREASE DELAY FOR ROUTINE 5.
 - C. CHECK FOR PATTERN OR DELAY RESET.
- 8. GO TO NEXT CARD (2 ABOVE).

5A

5.1.2 ERROR CHECKING

- ALL TEST ROUTINES CONTAIN THE FOLLOWING COMMON ERROR CHECKING.
- 1. DEVICE STATUS CHECK THE DEVICE STATUS IS READ AND CHECKED AS FOLLOWS:
 - A. BEFORE AN OPERATION IS INITIATED, THE DSW SHOULD BE ZERO. ANY BITS ON WILL BE IDENTIFIED BY A MESSAGE (E0F01).
 - B. IMMEDIATELY AFTER AN OPERATION, THE DSW SHOULD SHOW THE DEVICE TO BE BUSY AND NOT READY. ALL OTHER BITS SHOULD BE OFF. THIS DSW IS SAVED AND CHECKED FOR ERRORS AFTER THE OPERATION IS COMPLETED. A MESSAGE IS PRINTED IDENTIFING ANY ERROR DETECTED (E0F02).
 - C. IN INTERRUPT LEVEL ZERO, COLUMN INTERRUPT. THIS DSW SHOULD SHOW THE DEVICE BUSY AND NOT READY WITH THE CORRECT RESPONSE BIT ON. ALL ERRORS DETECTED FOR A CARD ARE OR'D TOGETHER. THUS THE DSW PRINTED IN THE ERROR MESSAGE (E0F04) CONTAINS ALL ERROR BITS WHICH WHERE FOUND ON IN ANY COLUMN DSW AND WILL BE MISSING ANY NORMAL BIT WHICH WAS FOUND OFF IN ANY COLUMN DSW.
 - D. IN INTERRUPT LEVEL FOUR OP COMPLETE INTERRUPT. THIS DSW SHOULD SHOW THE DEVICE READY (UNLESS THE HOPPER IS EMPTY) AND NOT BUSY. AND THE OP COMPLETE RESPONSE BIT SHOULD BE ON. A MESSAGE (E0F05) IS PRINTED IDENTIFYING ANY ERROR. NOT READY AND LAST CARD ARE ALSO IDENTIFIED BY UNIQUE MESSAGES. (A0F05 AND A0F06)
- 2. INTERRUPT CHECK-BOTH COLUMN INTERRUPT AND OP COMPLETE INTERRUPT ARE CHECKED AS FOLLOWS.
 - A. COLUMN INTERRUPT ALL COLUMN INTERRUPTS ARE COUNTED AND COMPARED AGAINST THE EXPECTED NUMBER. A MESSAGE IS PRINTED IF THESE DO NOT AGREE. (E0F08)
 - B. OP COMPLETE INTERRUPT AFTER THE CONTROL COMMAND IS GIVEN, THE PROGRAM GOES TO THE INTERRUPT WAIT ROUTINE. THIS ROUTINE WAITS IN A TIMED LOOP FOR AT LEAST 2 SECONDS. IF NO OP COMPLETE INTERRUPT HAS OCCURRED AT THE END OF THAT TIME, AN ERROR MESSAGE IS PRINTED (E0F03).

3. DATA CHECK

- A. PUNCH ANY PUNCH ERROR SHOULD BE DETECTED BY THE PUNCH ECHO CIRCUITS IN THE 1442. WHEN A PUNCH ECHO CHECK OCCURS. A MESSAGE IS PRINTED (E0F06) INCLUDING THE ECHO READ BACK FROM THE 1442 BUFFER. THE BITS ON IN THE ECHO WORD IDENTIFY THE BITS IN ERROR. ANY PUNCH ERRORS NOT DETECTED BY THE PUNCH ECHO CHECK WILL CAUSE A READ DATA ERROR IN THE FOLLOWING ROUTINE.
- B. READ ALL READ TESTS USE DECKS PREPARED BY THE PREVIOUS PUNCH ROUTINE (EXPECT TEST 6). THE READ TEST COMPARES THE DATA READ AGAINST THE DATA PUNCHED. THE EXCEPTION, TEST 6, COMPARES ALL CARDS AGAINST THE FIRST CARD READ.

5.2*** ROUTINE DESCRIPTION

THIS SECTION CONTAINS A DESCRIPTION OF THE PROGRAM ROUTINES AND SUBROUTINES IN APPROXIMATELY THE ORDER IN WHICH THEY APPEAR IN THE PROGRAM AS FOLLOWS -

- 1. TEST SEQUENCE CONTROL ROUTINE
- 2. NORMAL TEST ROUTINES
- 3. OPTIONAL TEST ROUTINES
- 4. TEST SUBROUTINES
- ERROR CONTROL ROUTINES
- 6. INTERRUPT ROUTINES

5.2.1 TEST SEQUENCE CONTROL ROUTINE - CNTRL

THIS ROUTINE CHECKS THE ROUTINE SELECTION SWITCH (SWI IN THE PROGRAM CONTROL TABLE) AND DETERMINES WHICH TEST ROUTINE IS TO BE RUN NEXT. IF A TEST ROUTINE HAS BEEN SELECTED, IT ESTABLISHED A TRANSFER TO THAT ROUTINE. IF NO ROUTINE IS SELECTED, A TRANSFER IS ESTABLISHED TO THE NEXT TEST ROUTINE IN SEQUENCE.

THE ROUTINE ADDRESS TABLE (RTTBC) WHICH IS PART OF CNTRL, CONTAINS THE ROUTINE ADDRESS FOR ALL TEST ROUTINES IN THE SEQUENCE IN WHICH THEY ARE TO BE RUN.

THE LAST TEST ROUTINE IN THE NORMAL SEQUENCE IS IDENTIFIED BY THE TABLE NRTN. AFTER THIS ROUTINE IS RUN, CNTRL WILL TRANSFER TO MONITOR END AND TERMINATE THE PROGRAM. ROUTINES FOLLOWING THE TABLE NRTN ARE CALLED OPTIONAL TEST ROUTINES AND WILL ONLY BE RUN IF SELECTED.

5.2.2 NORMAL TEST ROUTINES

IF NO TEST ROUTINE IS SELECTED, THESE SIX ROUTINES WILL RUN IN SEQUENCE THEN THE PROGRAM WILL TERMINATE.

1. TEST ROUTINE 1 - PUNCH AND FEED

THIS ROUTINE READS A CARD, CHECKS TO SEE THAT IT IS BLANK, IF BLANK PUNCHES IT WITH THE PATTERN SET IN THE ROTATE DATA TABLE. THEN SELECTS STACKER TWO AND FEEDS THE PUNCHED CARD OUT. REPEATING THIS SEQUENCE WILL CAUSE A BLANK CARD TO FIRST BE FED INTO STACKER 1 BY THE READ COMMAND THEN A PUNCHED CARD WILL BE FED INTO STACKER 2 BY THE FEED COMMAND. THE CARDS ARE PUNCHED WITH A ROTATING PATTERN, I.E., THE PATTERN IS SHIFTED ONE COLUMN TO THE LEFT FOR EACH SUCCEEDING CARD PUNCHED.

LOCK ON FUNCTION - THE PROGRAM WILL LOCK IN THE PUNCH OPERATION. ONLY PUNCH CONTROL COMMANDS WILL BE GIVEN. THE DATA PATTERN WILL ALSO LOCK WITH THE LAST PATTERN PRIOR TO SETTING THE LOCK SWITCH.

DATE

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2. TEST ROUTINE 2 - READ ROTATE PATTERN

THIS ROUTINE READS THE CARDS PUNCHED BY ROUTINE 1. THE DATA READ IS COMPARED TO THE DATA PUNCHED. ANY ERROR DETECTED WILL BE PRINTED.

LOCK ON FUNCTION - NOT APPLICABLE.

3. TEST ROUTINE 3 - PUNCH 40 COLUMNS

THIS ROUTINE WILL PUNCH THE ROTATING PATTERN IN THE FIRST 40 COLUMNS OF EACH CARD. EACH CARD IS CHECKED FOR BLANK BEFORE IT IS PUNCHED. ALL PUNCHED CARDS ARE SELECTED TO STACKER 2.

LOCK ON FUNCTION - LOCK IN THE PUNCH FUNCTION ONLY. CARDS WILL NOT BE CHECKED FOR BLANK AND THE PATTERN WILL NOT ROTATE.

4. TEST ROUTINE 4 - PUNCH FLIPPED PATTERN

THIS ROUTINE READS THE ROTATE PATTERN PUNCHED BY ROUTINE 3 AND COMPARES IT WITH THE DESIRED PATTERN. IT WILL THEN PUNCH THE MIRROR IMAGE OF THAT PATTERN IN COLUMNS 41-80.

LOCK ON FUNCTION - NOT APPLICABLE.

5. TEST ROUTINE 5 - READ FLIPPED PATTERN

THIS ROUTINE READS THE PATTERNS PUNCHED BY ROUTINES 3 AND 4. IT WILL THEN COMPARE THIS DATA WITH THE DESIRED PATTERNS.

LOCK ON FUNCTION - NOT APPLICABLE.

6. TEST ROUTINE 6 - CLUTCH TEST

THIS ROUTINE READS GANG PUNCHED CARDS (MAY BE BLANKS) WITH AN INCREASING DELAY BETWEEN EACH START READ COMMAND. ALL CARDS READ ARE COMPARED WITH THE FIRST CARD. THE DELAY IS INCREASED BY 1 MILLI SECOND FOR EACH CARD READ TO A MAXIMUM OF 125 MILLISECONDS. THE DELAY IS THEN RESET TO ZERO AND THE CYCLE REPEATED.

LOCK ON FUNCTION - LOCK ON READ WITH NO CHANGE IN DELAY BETWEEN START READ COMMANDS.

SPECIFY DELAY - THE DELAY CAN BE SPECIFIED BY A FUNCTION 2 BIT SWITCH ENTRY. THIS DELAY IS INCREASED BY APPROXIMATELY 8K (5K FOR 2.2 MSEC MEMORY) FOR EACH BINARY INCREMENT SET IN SWITCHES 8-15.

5.2.3 OPTIONAL TEST ROUTINES

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

1442 READER/PUNCH FUNCTION TEST

1. TEST ROUTINE 7 - PUNCH FROM SWITCHES

THIS ROUTINE WILL PUNCH ALL CARDS WITH THE DATA SET IN SWITCHES 0-11. THE NUMBER OF COLUMNS TO BE PUNCHED CAN BE SPECIFIED BY A FUNCTION 2 BIT SWITCH ENTRY. IF THE NUMBER OF COLUMNS IS NOT SPECIFIED, 80 COLUMNS WILL BE PUNCHED. CARDS ARE NOT CHECKED FOR BLANK BEFORE PUNCHING.

LOCK ON FUNCTION - NOT APPLICABLE.

2. TEST ROUTINE 8 - GANG PUNCH

THIS ROUTINE WILL READ THE FIRST CARD THEN PUNCH ALL FOLLOWING CARDS WITH THE DATA READ FROM THE FIRST CARD. EACH CARD WILL BE READ TO CHECK FOR BLANK.

LOCK ON FUNCTION - WILL BYPASS THE CHECK FOR BLANK CARDS.

3. TEST ROUTINE 9 - MODIFIED PUNCH DATA

THIS ROUTINE WILL READ IN ONE CARD AND REPLACE THE PUNCH DATA TABLE WITH THE DATA PATTERN PUNCHED IN THAT CARD. THE PROGRAM WILL THEN AUTOMATICALLY RESTART FROM ROUTINE 1.

5.2.4 TEST SUBROUTINES

1. ROTATE THE DATA TABLE

THIS SUBROUTINE ADVANCES THE PUNCH AND READ COMPARE ADDRESSES THROUGH A DOUBLE DATA TABLE.

2. CHECK FOR BLANK CARDS

THIS SUBROUTINE READS ONE CARD THEN CHECKS ALL COLUMNS FOR DATA. IF CARD IS NOT BLANK, AN ERROR MESSAGE IS PRINTED.

3. FEED A CARD

THIS SUBROUTINE CHECKS FOR 1442 READY, THEN FEEDS ONE CARD. FOLLOWING THE FEED COMMAND, THE SUBROUTINE TRANSFERS TO THE WAIT ROUTINE UNTIL THE INTERRUPT IS RECEIVED.

4. READ A CARD

THIS SUBROUTINE SETS EXPECTED COLUMN COUNT TO 80, CHECKS ON READY THEN EXECUTES A START READ COMMAND. THE SUBROUTINE TRANSFERS TO THE WAIT ROUTINE UNTIL THE INTERRUPT IS RECEIVED.

1442 READER/PUNCH FUNCTION TEST

5. PUNCH A CARD

THIS SUBROUTINE SETS THE EXPECTED COLUMN COUNT, CHECKS ON READY, SELECTS STACKER 2, THEN EXECUTES A START PUNCH COMMAND. THE SUBROUTINE TRANSFERS TO THE WAIT ROUTINE UNTIL THE INTERRUPT IS RECEIVED.

6. COMPARE DATA READ

THIS SUBROUTINE COMPARES DATA READ WITH THE EXPECTED PATTERN FOR THAT CARD. IF THERE ARE ANY DISCREPANCIES, AN E0F09 MESSAGE IS PRINTED.

LOCK ON FUNCTION

THIS SUBROUTINE IS ENTERED AT THE COMPLETION OF EACH PUNCH ROUTINE BEFORE ADVANCING TO THE DATA FOR THE NEXT PASS. THE SUBROUTINE CHECKS THE LOCK ON FUNCTION SWITCH, SWITCH 10. IF THIS SWITCH IS ON THE SUBROUTINE GOES TO THE ADDRESS SET IN LOOP.

8. READY

THIS SUBROUTINE IS ENTERED BEFORE ANY 1442 CONTROL COMMAND IS GIVEN. IT READS THE 1442 DSW AND CHECKS IT FOR READY (ALL BITS OFF). ANY BIT ON OTHER THAN NOT READY (BIT 15) WILL BE IDENTIFIED BY AN E0F01 MESSAGE. IF ANY BIT IS ON, A NRDY MESSAGE (A0F05) WILL BE PRINTED. THIS ROUTINE STAYS IN A LOOP, PRINTING THE NRDY MESSAGE EACH 10 SECONDS, UNTIL ALL BITS IN THE DSW GO OFF.

9. LAST CARD

THIS SUBROUTINE IS ENTERED AFTER AN OPERATION IS COMPLETED IF THE LAST CARD INDICATOR WAS TURNED ON DURING THAT OPERATION. THE SUBROUTINE WILL FEED OUT THE LAST CARD, PRINT A MESSAGE INDICATING THAT THE LAST CARD INDICATOR WAS DETECTED, THEN GO TO CNTRL TO TERMINATE THE ROUTINE AND ADVANCE TO THE NEXT ROUTINE.

5.2.5 ERROR CONTROL ROUTINES

1. INTERRUPT WAIT ROUTINE

ALL SUBROUTINES COME HERE AFTER THE START OF AN I/O OPERATION FROM WHICH AN INTERRUPT IS EXPECTED. THIS ROUTINE RESETS ALL ERROR CONTROL WORDS, SENSES AND STORES THE BUSY DSW, THEN WAITS IN A TIMED LOOP (AT LEAST 2 SECONDS) FOR THE OP COMPLETE INTERRUPT.

IF NO OP COMPLETE INTERRUPT IS RECEIVED, THE FOLLOWING ERROR MESSAGES ARE PRINTED.

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- A. E0F02 IF BUSY DSW ERROR
- B. E0F10 IF NO COLUMN INTERRUPTS
- C. E0F03 NO OP COMPLETE INTERRUPT.

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IF OP COMPLETE INTERRUPT IS RECEIVED, THIS ROUTINE WILL CHECK FOR PROPER PERFORMANCE OF THE OPERATION. THE FOLLOWING CHECKS ARE MADE AND ERROR MESSAGES PRINTED IF APPROPRIATE.

A. E0F02 IF BUSY DSW ERROR

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- B. E0F04 IF COLUMN INTERRUPT DSW ERROR.
- E0F05 IF OP COMPLETE DSW ERROR.
- E0F10 IF NO COLUMN INTERRUPTS.
- E. E0F08 IF INCORRECT NUMBER OF COLUMN INTERRUPTS.

THE ROUTINE WILL THEN CHECK FOR LAST CARD. IF THE LAST CARD INDICATOR IS ON, THIS ROUTINE WILL TRANSFER TO THE LAST CARD ROUTINE. IF NO LAST CARD, THE ROUTINE WILL RETURN TO THE I/O SUBROUTINE FROM WHICH IT WAS ENTERED.

2. PRINT ERROR MESSAGES

THIS ROUTINE PRINTS ALL THE ERROR MESSAGES. IF THE MESSAGE IS THE FIRST ERROR MESSAGE FOLLOWING AN I/O CONTROL COMMAND, A LAST OP MESSAGE WILL PRECEED THE ERROR MESSAGE. THIS LAST OF MESSAGE WILL IDENTIFY THE LAST I/O CONTROL OPERATION EXECUTED. THE ERROR MESSAGE FOLLOWING REFERS TO ERRORS DETECTED IN THAT OPERATION.

5.2.6 INTERRUPT ROUTINES

1. COLUMN INTERRUPT - LEVEL 0

THIS ROUTINE SENSES RESETS AND STORES THE DSW. THEN CHECKS FOR CORRECT DSW. ANY ERROR BITS ARE STORED. AFTER THE OPERATION IS COMPLETE, ALL ERROR BITS DETECTED DURING THAT OPERATION ARE AVAILABLE AND WILL BE PRINTED IN AN E0F04 MESSAGE.

THE ROUTINE COUNTS THE NUMBER OF INTERRUPTS AND EXECUTES EITHER PUNCH OR READ COMMAND, THEN RETURNS TO THE MONITOR LEVEL 0 INTERRUPT ROUTINE.

2. OP - COMPLETE INTERRUPT - LEVEL4

THIS ROUTINE SENSE, RESETS, AND STORES THE DSW, SETS A SWITCH INDICATING THAT THIS INTERRUPT WAS RECEIVED, THEN RETURNS TO THE MONITOR LEVEL 4 INTERRUPT ROUTINE.

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PART NO. 2191226

PAGE 9

1ST CARD PUNCHED IN ROUTINE 1 AND USED IN ROUTINE 2.

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2ND CARD PUNCHED IN ROUTINE 1 AND USED IN ROUTINE 2.

0 8 8 55 | 55 | 55 | 55 | 55 | 55 | 55 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65

3RD CARD PUNCHED IN ROUTINE 1 AND USED IN ROUTINE 2.

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM 1442 READER/PUNCH FUNCTION TEST

PART NO. 2191226 PAGE 9A

1ST CARD PUNCHED IN ROUTINE 3 TO BE USED IN ROUTINE 4.

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1ST CARD WITH COLUMNS 41 THROUGH 80 PUNCHED IN ROUTINE 4.

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1442 READER/PUNCH FUNCTION TEST

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1442 READER/PUNCH FUNCTION TEST

DATE

30F00040. * THIS ENGINEERING CHANGE REFLECTS MAJOR 30F00050 CHANGES TO THE DIAGNOSTIC MONITOR. PREVIOUS 30F00060 30F00070 TESTS WILL NOT RUN WITH DIAGNOSTIC MONITOR II. 30F00080 30F00090 THIS TEST WILL NOT KUN WITH PREVIOUS MONITORS. 30F00100 TESTS PRIOR TO EC 419643 DATED NOV 15, 1966 30F00110 30F00120 WILL NOT OPERATE PROPERLY WITH DIAGNOSTIC MONITOR II. 30F00130 30F00140 ********* 30F00160 30F00170 ±-----1130 - 1442 READER/PUNCH FUNCTION TEST 30F00180 30F00190 ************ 30F00200 30F00210 EQUATE TABLE ********* 30F00220 THIS TABLE EQUATES TEST PROGRAM LABELS 30F00230 30F00240 TO THEIR EQUIVALENT DIAGNOSTIC MONITOR 30F00250 ADDRESSES. 30F00260 30F00270 MONITOR ENTRY ADDRESSES 30FG0280 30F0G29J BEGIN ROUTINE 30FC0300 0160 BEGIN EQU START EQU BEGIN+1 SUPERVISOR ROUTINE 30F00310 0161 ERROR LCG ROUTINE 30F00320 START+1 ERROR EQU 0162 30F00330 FRROR+1 STATUS LOG ROUTINE LUG 0163 EQU 30F00340 END ROUTINE END ΕQU LOG+1 0164 30F00350 30F00360 MONITOR CONTROL WORD ADDRESSES 30F00370 09E00380 ROUTINE START SW 30F00390 FND+1 0165 RINSH EUU LCCK ON ERROR CONTROL 30F00400 0166 ERLCK EQU END+2 30F00410 END+3 I/D BUSY SW ADDRS LOGBY EQU 0167 RELOCATION FACTOR ACORS 30F00420 0168 RLCF EQU END+4 30F00430 30F00440 30F00450 INTERRUPT TRANSFER VECTOR ADDRESSES 30F00460 30FC0470 INTERRUPT LEVEL ZERO 017A ILO /17A ILI EQU IL 0+16 INTERRUPT LEVEL ONE 30F00480 0184 INTERRUPT LEVEL TWO 30F00490 IL1+16 IL2 EQU 019A INTERRUPT LEVEL THREE 30F00500 11 2+16 OIAA 113 FOU INTERRUPT LEVEL FOUR 30F00510 IL4 EQÚ IL3+16 01 BA CONSOLE PRINTER REQUEST 30F00520 RUTY EQU IL4+1 0188 USE KEYBOARD REQUEST 30F00530 RQTY+1 ROKB E QU OIBC KB SERVICE REQUEST 3GF00540 EQU ROKB+1 SVKB OIBD 30F00550 ************* 30FG0560 *+/05CC 30F00570 ORG 0000 30F00580 30F00590 THE MONITOR USES CORE LOCATIONS 0-05DC. 30F00600 FOR CONTENTS OF THESE ADDRESSES REFER 30F00610 TO THE DIAGNOSTIC MONITOR LISTING. 30F00620 30F00630 30F00640 30F00650 30F00660 ************* 30F00670 30F00680 PROGRAM CONTROL TABLE ****************** 30F00690 30F00700

30F00710 /030F PROGRAM ID 05DC 0 030F 30F00720 ROUTINE ID 05DD: 0 0000 k I O ROUTINE ADDRS 30F00730 CAR DC *-* 05DF 0 0000 30F00740 PREGRAM CONTROL 05DF 0 -0000 SMO DC. ***-*** ROUTINE SELECTION 30F00750 ***-*** 05E0 0 0000g Swl DC 30F00760 Sh2 DC *-* 05E1 0 0000 30F00770 05E2 0 0000 Sw3 STRT LOOP ACDRS 30F00780 DC 05E3 1 05E6 RESTART ADDRESS 30F00790 05E4 1 05EB STRT DC MLSCF DC ***-**SET BY WAIT RTN AND MON 30F00800 05E5 0 0000 SET BY CNTRL AND INRTPT 30F00810 *-* 05E6-0 0000 ЭC 30F00820 /FFFF TERMINATOR DC 05E7:0 - FFFF 30F00830 ********** 30F00840 30F00850 TEST INITIALIZATION ************ 30F00860 30F00870 30F00880 05E8 00 44800160 BSI I BEGIN 30F00890 PID PCT ADDRESS 05EA 1 05DC 30F00900 30FC0910 * START OF TEST AND SINGLE PASS INITIALIZATION 30F00920 30F00930 30F00940 SET TO START WITH 30F00950 05EB 0 6100 STRT LDX 1 0 FIRST ROUTINE 30FG0960 05EC U 69F0 STX. 1 RID LDX L1 INTRO 30F00970 05ED 01 65000911 SET COL INTRPT ADDRS 30F00980 05EF 00 6D00017A STX L1 ILO RESET MULT LINE CONTROL 30F00990 05F1 01 6D000884 STX L1 M 05F3 01 65000937 LDX L1 INTR4 30F01000 05F5 00 6D0U01B8 STX L1 1L4-2 SET OP COMP INTRPT ADDRS 30F01010 30F01020 CNTRL 05F7 0 4000 BSI 30FU1030 ****** '***************** 30F01040 30F01050 SEQUENCE CONTROL ROUTINE ************* 30F01060 THIS ROUTINE CHECKS SWI AND CONTROLS 30F01070 THE SEQUENCE IN WHICH TEST ROUTINES 30F01080 30F01090 ARE RUN. 30F01100 30F01110 30F01120 05F8 0 0000 CNTRL DC 05F9 0 C0E6 LD Swl 30FU1130 BSC L CN20++ BR IF NC RTN SELECTO 30F01140 05FA 01 4C080603 30F01150 SAVE NEW KIN NUMBER 30F01160 05FC-0 D0E0 CN10 STO RID 05FD 0 9018 RIDCK 30F01170 05FE 01 4C080609 BSC L CN30,+ BR IF VALID RTN 30F01180 30F01190 SRA 0600 0 1810 16 IF INVALID RTN GO 30F01200 STO 0601 0 DODE SWI 30F01210 TO RTN ONE 0602 0 DODA STO RID 30F01220 0603 U1 740105DD MDX RID,1 ADV TO NEXT RTN 30F01230 CHECK FOR END OF 30F01240 0605 0 CCD7 LD RID 30F01250 RTNOM NCRMAL SECUENCE 0606 0 9010 END OF PROGRAM 30FU1260 BSI I END,-Z 0607 00. 44800164 30F01270 C609 01 658005DD CN30 LDX II RID XRI=NEW ROUTINE NUMBER 30F01280 LD L1 RTTBL-1 FETCH RETURN ADRS 30F01290 060B 01 C5000617 30F01300 060D 0 DCDC STO RAD STORE NEW RTN ADDRS MLSCF+1 SET MLSCF FOR RETURN 30F01310 STG **060E 0 DOD7** STO L RTNSW SET RIN START SH 30F01320 060F 00 D4000165 0611 0 1810 SRA 16 30F01330 STD L LOOP 30F01340 0612 O1 D4000894 851 START GG TO MONITOR 30F01350 0614 00 44800161 30F01360 RIDCK DC LRTN-RTTBL+1 30F01370 0616 0 0009 RTNOM DC NRTN-RTTBL+1 30F01380 0617 0 0006

1442 REAGER/PUNCH FUNCTION TEST

1442 READER/PUNCH FUNCTION TEST

		*	ROUTINE	ADDRE SS	TABLE	30F0139
		*				30F014
		*		10000		30F014
18 1	0621	RTTBL	DC	RT1	PUNCH AND FEED	30FC14
19 1	(1636		DL	RT2	READ ROTATE PATTERN PUNCH 40 COLUMNS PUNCH FLIPPED PATTERN	30F0144
LA 1	0654		DC	RT3	PUNCH 40 COLUMNS	30F014
18 1	0669		DC	RT4	PUNCH FLIPPED PATTERN	30F014
IC I	0694		111.	RT5	READ FLIPPED PATTERN READ ANY CARD PUNCH FROM BIT SWS GANG PUNCH	30F014
ID 1		NRTN		RT6	READ ANY CARD	30F014
IE I	0666			RT7	PUNCH FROM BIT SWS	30F0149
LF 1			DC	RIB	GANG PUNCH	30F0150
20 1	0731	LRTN	שנ	RT9	MODIFY ROTATE PATTERN	30F015
		Ţ		* '	and the second second second second	30F015
		****	******		******	30F015
		_		DOUTTAGE	1 DULCH AND FEED	205015
		****	******	*****	1 - PUNCH AND FEED	30F015
					AD A CARD, CHECK THAT THE	30F015
					THE CARD WITH A ROTATING	30F015
		# PAT	TERN. TH	EN FEED A	CARD. ALL PUNCHED CARDS	30F015
		* will	L GO TO	STACKER 2	, ALL BLANK CARDS WILL	30F016
			TO STACK			30F016
		*				30F016
						30F016
21 01	65000A33	RT1	LDX L1	WAREA		30F016
	60000784		STX LI	DADRS	ROTATE PATTERN Message Number	30F016
25 0	6101		LDX 1	1	MESSAGE NUMBER	30F016
26 01	670009EB		LDX 1	ALDBK	LD BLANKS	30F016 30F016 30F016
10 85	44000967		BSI L	TYPE	PRINT MESSAGE	30F016
		*				30F016
2A 01	4400074A	RT11	BSI L	BLANK	CK FOR BLANK CARD SEI LOOP FUNCTION ADDRS SET NUMBER OF COLUMNS	30F017
2C 01	60000894		STX L	LOOP	SET LOOP FUNCTION ADDRS	30F017
2E 0	6350		LDX 3 BSI L	80	SET NUMBER OF COLUMNS	30F017
	4400078D				PUNCH ONE CARD	30F017
31 01	440007FU		BSI L	LDCK	CHECK FOR LOCK ON FUNC	30F117
		.*		00747	DOTATE THE DATTERN	30F017
	4400U73D			ROTAT	ROTATE THE PATTERN	30F017
	4400075B			FEED	FEED A CARD	30F017 30F017
3 7 0	1012	*	MD K	RT11		30F017
		-			*******	30F018
		*	******		2 - READ ROTATE PATTERN	30F018
		****	*****		*******	30F018
		# TL1	C DOUT IN	E will 08	AD THE POTATE PATTERN	30F018
		* PUN	CHED BY	ROUTINE 3	. IT WILL COMPARE THE	30F018
		* PAT	TERN ON	EACH CARE	WITH THE DESIRED PATTERN	
			THAT CA			30F018
		*				30F018
		*				30F018
38 01	650UUA33	RT2	LOX L1	MAREA	SET FOR START OF	30F018
3A 01	60000784		STX L1	DADRS	ROTATE PATTERN	30F019
3C 0	6102		LDX 1	2	MESSAGE NUMBER	30F019
3D 01	67000A0D		and the second second	ASTOH	STK TO HOPPER	30F019
3F 01	44000967		BSI L	TYPE	PRINT MESSAGE	30F019
		*			tinda kalendra na maga tinda dibiya tida dibiya. Tinda kalendra na maga tida kalendra dibiya tida dibiya maga kalendra dibiya kalendra dibiya kalendra dibiya k	30F019
41 0	6350	RT21		80	SET ALL BITS IN	30F019
	C4000768	4 <u>255</u> 25	LD L	TERM	READ AREA SERVICE CONTROL OF SERVICE CONTROL OF SER	30F019
	D7000A83	RT22			MATERIAL PROBLEMS AND THE	30F019
6 0	73FF			_		30F019
47 0	70FC	4 _14-19	MDX	RT22	er eithe bearing godinger.	30F019
		. T			人名 (1) 1	
	65000A84	RT23	LDX L1		SE DEADONE FRADA LERS LES	30F020
	4400076C	8 1786	BSI L		SEAD ONE CARD SEAS	30F020
	40100648	4 1417		RT23,-	SET NUMBER OF COLUMNS	30F020
	6350	45.			COMPARE DATA READ	30.020
	£ 4.000743					
	440007A3	្នម±្នាក្ស •	BSI L.	大型 年 4 下 4 年 4 年 4 7	WITH DATA PUNCHED	30F020

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					•		The second secon
and the second		*					30F02070
	4400073D			L		ROTATE THE PATTERN	30F02080
0653 0	70ED		MDX		RT21		30F02090
		*				*******	30F02100 30F02110
			*****	**	DOLTINE 2	- PUNCH 40 COLUMNS	30F02120
		****	****	* * :	******	- FUNCH 40 COLUMNS	30F02130
		# TH	IS RIII	TIE	NE WILL PL	**************************************	30F02140
		≠ IN	THE F	IR:	ST 40 COLU	MNS OF EACH CARD. ALL	30FU2150
					GO TO STA		30F02160
		*					30F02170
		*					30F02180
0654 01	65000A33	RTJ	LDX	LI	HAREA	SET FOR START OF	30F02190
	6D000784		STX	Ll	DADRS	ROTATE PATTERN	20F02200
0658 0					1	MESSAGE NUMBER	30F02210
	670009EB	* J*			ALDBK	LD BLANKS PRINT MESSAGE	30F02220 30F02230
065B 01	44000967		821	L	TYPE	PRINT MESSAGE	30F02240
0/50 01	4.4000744	# DT21	261		DE ANIX	CH EDS BLANK CARD	30F02250
0650 01	4400074A 6C000694	KI31	CTY	L	LOCA	CK FOR BLANK CARD SET LOOP FUNCTION ADDRS SET NUMBER OF COLUMNS	30F02260
0651 01	6328		101	ัฉ	40	SET NUMBER DE COLUMNS	30F02270
	4400078D		BSI	1	PNCHR	PUNCH DNE CARD	30F02280
	440007F0		вSI	Ĺ	PNCHR LOCK	CHECK FOR LOCK ON FUNC	30F02280 30F02290
		*					30F02300
0666 01	4400073D		BSI	L	ROTAT	ROTATE THE PATTERN	30F02310
0668 0	70F4		MDX		RT31		30F02320
		.*	ž.				30F02330
		*** **	*****	**	*****	*******	30F02340
		*	s francis.		ROUTINE 4	- PUNCH FLIPPED PATTERN	30F02350
						******	30F02360
		# IH	12 KUU	111	NE WILL KE	AD THE RCTATE PATTERN	30F02370
		* PU	NUMED.	DT.	RUUIINE 3	AND COMPARE IT WITH IT WILL THEN PUNCH THE	30502300
		± 10	DDUD 1	MA	SE OF THAT	PATTERN IN COLUMNS 41-80.	30F02590
		*					30F02410
		at a jurat unit. •				en e	30F02420
0669 01	65000A33	RT4	LDX	LÍ	WAREA	SET FOR START OF	30F02430
	6D000784		STX	LL	DAUKS	ROTATE PATTERN	30F02430 30F02440 30F02450
066D 0			LDX	1	2	MESSAGE NUMBER	30F02450
	67000A0D					STK TO HOPPER	30F02460
0670 01	44000967		BSI	L	TYPE	PRINT MESSAGE	30F02470
0.70.01		*			0.4054		30F02480
	65000A84	K141	LUX	LI	RAREA	DEAD ONE CARD	30F02490 30F02500
	4400076C 4C100672		B 21	L	REAUK RT41	READ DNE CARD REPEAT IF NO OP COMP SET NUMBER OF COLUMNS	30F02510
0678 0			IDX	ิจ	40	SET NUMBER OF COLUMNS	30F02520
	440007A3	e	BSI	Ĺ	COMPR	COMPARE DATA READ	30F02530
		*				WITH DATA PUNCHED	30F02540
		*					30F02550
067B 01	4400073D		BSI	L	ROTAT	ROTATE THE PATTERN	30F02560
		*			*	the state of	30F02570
067D 0		RT42				LOAC XR 3	30F02580
067E 0	62D8	and the second	LDX	2	-40	LOAD XR 2	30F02590
A. == ==		* *				5.54	30F02600
	C6000AAC	FLIP			RAREA+40	DATA READ	30F02610
	D7000AD5				RAREA+81	NEW LOCATION	30F02620
0683 0			MDX	2	-1 1	ADJ XR 3	30F02630 30F02640
0684 0			MDX	-	FLIP	ଟର୍ ରପ୍ରାପ୍ୟନ୍ତ2 ଅଟନ୍ତ୍ର ବିନ୍ଦ୍ର ଅଧିକ୍ର ଅନ୍ତର୍ଭ ଅନ୍ତର୍ଭ ଅନ୍ତର	30F02650
	37, 0F9 3838				. 7 1	त्रकेश केन कर्मा है। महेश है पर क ्री	30F02660
0686 0		· 1	LDX	2	-40	LOAD XR 2	30F02670
0687 U		i detece	SLA		17	CLEAR ACC	30F02680
0688 01		CLEAR		100	RAREA+40	CLEAR COL 1 TO 40	30F02690
068A O.		- 1000 - 12 - 2003 - 50	X CM	2	ĭ		30F02700
068B 0		7 + 23 - 134 7 + 23 - 134	MDX	3.	CLEAR		30F02710
0905.0		i va• † ti.			1.49		30F02720
068C 01		N 1.0	LDX	. 37 /		7 303 166 - 70067 2001 166 - 700 167	30F02730
068E 01	6D000784	6.15 B	STX	LÌ,	DADRS	SET PUNCH DATA ACRS	30F02740
					•	en e	30多位数1400
DATE	فالمعادمة المام	01114		E 6	344.4		0000
DATE TREC NO.	02JAN66	01MAY	06 I		0V66 543		PRDG ID
MACA BOOK	-e ∖a≖yayo,	*850 2 †行何 で	rrai 🧻	4 70	, , ,		FAUE

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

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1442 READER/PUNCH FUNCTION TEST

691 01 693 0 694 01 696 01 698 0 699 01 698 01	4400078D 700E 65000A33 6D000764	* ***** * ***** TH PU * nI	BSI MDX ****** HIS FC INCHED TH DE	**** **** OUTII O BY	PNCHR RT41 ************************************	SET NUMBER OF COLUMNS PUNCH ONE CARD ***********************************	30F02750 30F02760 30F02770 30F02780 30F02790 30F02800 30F02810 30F02820 30F02830
691 01 693 0 694 01 696 01 698 0 699 01 698 01	4400078D 700E 65000A33 6D000764 6102 67000A0D	* ***** * ***** * TH * PU * nI	BSI MDX ****** HIS FC INCHED TH DE	**** **** OUTII O BY	PNCHR RT41 ************************************	PUNCH ONE CARD ****************** - READ FLIPPED PATTERN **************************** AD THE FLIPPED PATTERN	30F02770 30F02780 30F02790 30F02800 30F02810 30F02820
0693 0 0694 01 0696 01 0698 0 0699 01 069B 01	70DE 65000A33 6D000764 6102 67000A0D	* ***** * ***** * TH * PU * nI	MDX ***** IS FC INCHED TH DE	**** **** OUTI! O BY	**************************************	**************************************	30F02780 30F02790 30F02800 30F02810 30F02820
694 01 696 01 698 0 699 01 698 01	65000A33 6D000764 6102 67000A0D	* * * * * * * * * * * * * * * * * * *	****** IS FO INCHED TH DE	**** **** OUTII O BY ESIRI	**************************************	READ: FLIPPED PATTERN ************************************	30F02780 30F02790 30F02800 30F02810 30F02820
696 01 698 0 699 01 698 01 69D 01 69F 01	6D000764 6102 67000A0D	* ***** * TH * PU * nI *	****** IIS FO INCHED TH DE	**** DUTII D BY	ROUTINE 5 *********** NE WILL REA	READ: FLIPPED PATTERN ************************************	30F02800 30F02810 30F02820
596 01 598 0 599 01 598 01 59B 01	6D000764 6102 67000A0D	* ***** * TH * PU * nI *	****** IIS FO INCHED TH DE	**** DUTII D BY	ROUTINE 5 *********** NE WILL REA	READ: FLIPPED PATTERN ************************************	30F02810 30F02820
596 01 598 0 599 01 598 01 59B 01	6D000764 6102 67000A0D	***** * TH * PU * nI *	IS FO	**** DUTII D BY ESIRI	*************** NE WILL:REA "ROUTINES:3	**************************************	30F02810 30F02820
596 01 598 0 599 01 598 01 59B 01	6D000764 6102 67000A0D	* TH * PU * nI *	IS FO	OUTII BY SIRI	NE WILL REA	AD THE FLIPPED PATTERN	30F02820
596 01 598 0 599 01 598 01 59B 01	6D000764 6102 67000A0D	# PU # nI #	TH CE	BY SIRI	ROUTINES		
596 01 598 0 599 01 598 01 59B 01	6D000764 6102 67000A0D	* nI *	TH CE	SIRI		J AND TY THEN COME AND	
596 01 598 0 599 01 598 01 59B 01	6D000764 6102 67000A0D	*			ED PALIENNA		30F02840
696 01 698 0 699 01 698 01 690 01	6D000764 6102 67000A0D	*					30F02850
696 01 698 0 699 01 698 01 690 01	6D000764 6102 67000A0D						30F02860
596 01 598 0 599 01 598 01 59B 01	6D000764 6102 67000A0D	K.15			4054	CET FOR START CE	30F02870
698 0 699 01 698 01 690 01 697 01	6102 67000A0D		LUX	LI	WAREA	52. 15. 51	
699 01 698 01 69D 01 69F 01	67000A0D		STX		DADRS	RUIAIE PAITERN	30F02880
69B 01 69D 01 69F 01			LD>		2		30F02890
59D 01 59F 01	44000967				ASTOH		30F02900
69F U1			8 S I	L	TYPE	PRINT MESSAGE	30F02910
69F U1		*					30F02920
	65000A84		LDX	Ll	RAREA		30F02930
6A1 01	4400076C		BSI	F	READR		30F02940
	4C10069D	. 18	BSC	L	RT51	REPEAT IF NO OP COMP	30F02950
6A3 0	6328		LDX	: 3	40 :: :	SET NUMBER OF COLUMNS	30F02960
	6C00078C		STX	L	FLIPS	SEL FLIP SW	30F02970
	440007A3		BSI			COMPARE DATA READ	30F 0 298 0
		*		-		WITH DATA PUNCHED	30F02990
		*					30F03000
648 01	4400073D	•	BSI	,	ROTAT	ROTATE THE PATTERN	30F03010
	70F2		MDX		RT51	Corne de la	30F03020
UMM U		*	HUA	,			30F03030
1.7		•	***	***	***	******	30F03040
		****	·~~~~		**************************************	- CLUTCH TEST	30F03050
		er Turkeren er		. ها ها چه و	******	- CLUTCH TEST	30F03060
							7 5 7 7 7 7 7
						AD GANG PUNCHED CARDS WITH	
						BETWEEN EACH START READ	
						EAD WILL BE COMPARED WITH	30F03090
		* 11-	E FIR	IST (CARD.		30F03100
		*					30F03110
			for the			er <u>i kojo storovitiko o</u> vali i koji	30F03120
	6104	RT6					30F03130
6AC 01	67000A27		LDX	L3	ALACD	OR GANG PUNCH	30F03140
6AE 01	6F000974		STX	L3	ALPHA+1		30F03150
	670009EB		LDX	L3	ALDBK	LD BLANKS	30F03160
	44000967		BSI		TYPE	PRINT MESSAGE	30F03170
	1.000,01	*	-	_			30F03180
684 O1	65000AD4		LDX	11	RAREB		30F03190
	4400076C		BSI		READR	READ ONE CARD	30F03200
		*	331	-	KEADK	name energy variable	30F03210
6B8 0	1810	RT61	SDA		16	· · · · · · · · · · · · · · · · · · ·	30F03220
	-, -	K 101	STO		DEACT	RESET CLUTCH DELAY FACTOR	30EU353U
	D40006E3					ALSEL CLUPCH DELAT FACIUR	30F03240
			LDX		125	INTITIALIZE DACE COUNT	
BC O	6B28		STX	. 3	T6CNT	INITIALIZE PASS COUNT	30F03250
	4.4	*				CET 1000 EUNCTION 10000	30F03260
	6C000894				LOOP		30F03270
	C40005E1	RT62	ΓD	L	SW2	CK SW2 FOR CONSTANT DELAY	30F03280
C1 0	1003		SLA		3 37.7	Agg + 1 − 16 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	30F03290
5C2 0	4808		BSC		s .♦ •		30F03300
5C3 0	COIF		LD		DFACT	LD DELAY FACTOR	30F03310
	DO1F		STC		DLYCT	SET DELAY COUNTER	30F03320
-		*					30F03330
	650006CB	RT63	LDX	LI	RT64		30F03340
505 01	6D0005E6		STX		MLSCF+1	SET RETURN ADDRS	30F03350
			BSC		WAIT4	GO TO MONITOR	30F03360
C7 01	TOUUUUM	*	536	-			30F03370
C7 01		-	MDX	L	DLYCT,-1	DEC COUNTER	30F03380
6C7 01 6C9 01				L		DEC COUNTER	30F03380
6C7 01 6C9 01 6CB 01	74FF06E4	RT64					シロトロコラガリ
6C7 01 6C9 01 6CB 01		RT64	MDX		RT63		20503400
6C7 01 6C9 01 6CB 01 6CE 0	74FF06E4 70F7	RT64	MDX				30F03400
6C7 01 6C9 01 6CB 01 6CE 0	74FF06E4 70F7 65000AD4	RT64	MDX LDX		RAREB	SET FOR COMPARE	30F03410
6C7 01 6C9 01 6CB 01 6CE 0	74FF06E4 70F7	RT64	MDX				
6C7 01 6C9 01 6CB 01 6CE 0	74FF06E4 70F7 65000AD4 6D000784	RT64	MDX LDX STX	Ll	RAREB DADRS		30F03410
6C7 01 6C9 01 6CB 01 6CC 0	74FF06E4 70F7 65000AD4	RT64	MDX LDX STX		RAREB DADRS		30F03410

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1442 READER/PUNCH FUNCTION TEST

			5 - 1 5 - 1 - 4		en e		
6D2 01	65000A84	4.	LDX	L1	RAREA	44	30F03
	4400076C				READR		30F03
	4C1006CE				RT65	REPEAT IF NO OP COMP	30F03
608 0			LDX		80	SET NUMBER OF COLUMNS	30F03
	440007A3		BSI		COMPR	COMPARE DATA READ	30F03
007 01	440001A3	*		-	COLL	WITH DATA PUNCHED	30F03
	4.4000750	7.7	25.1	7.15	1004	CK FOR LOCK ON FUNCTION	30F03
	440007F0		8 S I	L	LOCK	CK FUR LUCK LIN FUNCTION	30F03
	37 - 475	*				AND CLUTCH OFLAN FACTOR	and the second second
	740106E3	100	MDX		DFACT,1		30F03
6DF 01	74FF06E5		MDX	L	TOCNT,-1	DEC COUNT	30F03
6E1 0	7 0DD		MDX		RT62		30F03
6E2 0	7005		MDX		RT61	RESET DELAY	30F03
		*					30F03
6E3 0	0000	DEACT	DC		*-*		30F03
	0000	DLYCT			*-*		30F03
6E5 0	0000	T6CNT			*-*		30F03
027 0	0000	*	-				30F03
		·=	****	***	*****	*****	30F03
		*	****	***		- PUNCH FROM SWITCHES	30F03
						*******	30F03
						CH ALL CARD COLUMNS	30F03
		≠ WI	TH TH	E D	ATA SET IN	BIT SWITCHES 0-11.	30F03
3 Y 1 1 1		*					30F03
	4	*			4 2 2 1		30F03
6E6 01	65000A84	RT7	LDX	L1	RAREA	SET TO PUNCH FROM	30F03
6E8 01	6D000784		STX	L1	DADRS	RAREA	30F03
SEA O			LDX	. 1	7		30F03
_	670009EB				ALDEK	LD BLANKS	30F03
	44000967				TYPE	PRINT MESSAGE	30F03
JED UI	44000701	*	55.	_		THE THE STATE	30F03
	((3000(3	•	DCI		READY	The state of the s	30F03
	44300942		BSI				30F03
6F1 0			LDX				
	67000A15				ASETP	SET PATT	30F03
6F4 U1	44000967		BSI	L	TYPE	PRINT MESSAGE	30F03
3 - 1	144	*	4				30F03
6 F6 01	0C000782	RT71	XIO	L		REAC BIT SWS	30F03
5F8 0	C020		LD		RT7SW	LD SW SETTING	30F03
6 F9 0	100C		SLA		12	CHECK BIT 12	30F03
6FA 01	4C280702		B SC.	L	RT72,+Z	BR IF 12 ON	30F05
		*	ر				30F03
6FC 01	650006F6		LDX	L1	RT71		30F03
	6D0005E6		STX		MLSCF+1		30F03
	4C0008DA		BSC	Ē			30F03
100 01	4COOODA	•	030	_	HALIT		30+ 23
703 0	C014	0177			0 T 7 C W	LD PATTERN	30F03
	C016	RT72			RT7SW		30F03
	1804		SRA		4	REMOVE 12 BIT	
	1004		SLA		4		30F03
	D013		STO		RT7SW		30F03
706 0	6150		LDX	_	80		30F03
707 01	£8A0063	RT73	STO	Ll	RAREA-1	FILL RAREA	30F03
709 0	71FF		MDX	1	-1	WITH PATTERN	30F03
	70FC		MDX		RT73		30F03
- · · · ·		*		-			30F03
70B 01	678005E1	RT74	LDX	13	SW2	CK COL CNT OPTION	30F03
	7300		MDX		0	J.: 302 J.: 5112011	30F03
			MDX	,	*+1		30F03
70E 0	7001			3		CHID IE CHO CET	
	6350		LDX		80	SKIP IF SW2 SET	30F03
710 01	4400078D	10 mg 20 mg 4	BSI	,L,	PNCHR	PUNCH ONE CARD	30F04
		*					30F04
712 0	086F		XIC		SNSWS	READ BIT SWS	30F04
713 0	C005		ĿD		RT7Sm		30F04
	F4000A84		EOR	L	RAREA	CK FOR CHANGE OF SWS	30F04
	4C2006F6		B SC	Ĺ		BR IF SW CHANGED	30F04
	70F2		MDX	-	RT74	and the second of the second o	30F04
		*					30F04
719 0	0000	RT7SW	DC		*-*	BIT SW STORAGE	30F04
112 0	0000	* K112#	50			DIT ON STURMUL	30F04

30F04790

30F04800

30F04810

30F04820

30F04830 30F04840 30FU4850

30FU4860

30F04870

30F04880

BLK1 LD L2 RAREB-1

X GM

MDX

BSC L ERRO, Z

2 -1

BSC I BLANK

BLKI

FEED A CARD

BR IF NOT BLANK

1442 KEADER/PUNCH FUNCTION TEST

0753 C1 C60.00AD3

0755 01 4C2007FE

0759 01 4C80074A

0757 0 72FF

0758 C 70FA

1442 READER/PUNCH FUNCTION TEST

			*			ROUTINE	8 - GANG PUNCH	30F04110
			***	***	****	*****	*******	30F04120
			* TH	IS R	ITUC	NE WILL R	LEAD ONE CARD THEN PUNCH	30F04130
			# AL	L FO	LL On	ING CARDS	WITH DATA READ FROM FIRST	30F04140
				RD.				30F04150
		1 1 × 1	*					30F0416
			*					30F04170
1 A	0.1	65000A84	RT8	LCX	1.3	RAREA	SET TO PUNCH	30F0418
		6D000784	K . 0	STX		DADRS	DATA READ	30F04190
16		6103		LEX			MESSAGE NUMBER	30F0420
						ANYP	LD ANY PATTERN PLUS BLANKS	
_	-	670009F1		LDX			PRINT MESSAGE	30F0422
21	01	44000967		BSI	L	TYPE	PRINI MESSAGE	30F0423
			*					
		65000A84		LDX		RAREA		30F0424
25	01	4400076C		BSI	F	READR	READ ONE CARD	30F0425
			*			7		30F0426
27	01.	4400074A	RT81	BSI	L	BLANK	CK FOR BLANK CARD	30F0427
29	01	60000894		STX	L	LOOP	SET LOOP FUNCTION ADDRS	30FU428
28	0	6350		LDX	3	80	SET NUMBER OF COLUMNS	30F0429
2 C	01	4400078D		BSI	L	PNCHR	PUNCH ONE CARD	30F0430
2 E	01	440007F0		BSI	Ľ	LOCK	CHECK FOR LOCK ON FUNC	30F0431
30		70F6		MDX		RT81		30F0432
•	•		*					30F0433
*		4	****	****	****	******	*******	30F0434
		•					9 - MODIFY ROTATE PATTERN	30F0435
		٠.	***	****	***		********	30F0436
		•					REPLACE THE ROTATE DATA	30F 0437
							RED PATTERN- THEN START	30F0438
				-			INCO PATTENT THEN STANT	30F0439
			* WI	IH R	0011	NE 1.		30F0440
			*					
			*					30F0441
31	O	6103	RT9	LDX		3	MESSAGE NUMBER	30F0442
32	01	670009F1		LDX	L3	ANYP	LD ANY PATTERN PLUS BLANKS	and the second second
34	01	44000967		BSI	L	TYPE	PRINT MESSAGE	30F0444
			*					30F0445
36	01	65000A33		LDX	Ll	WAREA		30F0446
38	0	4033		951		READR	READ ONE CARD	30F0447
			*					30F0448
30	Ωl	6C0005E0		STK	L	SW1	SET CONTROL TO RESTART	30F0449
		440U05F8		BSI	ī	CNTRL	GO TO CONTROL	30F0450
30	01	44000510	*		_			30F0451
1.1			****	***	** **	*****	*******	30F0452
			*	****			THE DATA TABLE ADDRESS	30F0453
		1.11	***				*******	30F0454
				****	***	******		30F0455
	_		*					
3D	-	0000	ROTAT			*-*		30F0456
		74010784		MDX		DADRS ,1	ADVANCE THE DATA ADDRS	30F0457
40	01	C4800784		LD	1		CHECK FOR DATA	30F0458
42	0	F045		EOR		TERM	TABLE TERMINATOR	30F04590
43	01	4CA0073D		BSC	1	ROTAT .Z	RETURN IF NO TERM	30F0460
45	01	65000A33		LDX	Ll	WAREA	IF TERM - RESET TO	30F0461
47		693C	7	STX		DADRS	START OF TABLE	30F 0462
_		4C80073D		BSC		ROTAT	and the second process of the second particles and the second particles are second particles.	30F0463
			*	550		SPERVIOR	the second	30F0464
			****	****			******	30F0465
							DRUBLANK CARDINAL BARRES	30F0466
			-	***	**	ひいにした ドレ	reessand card assess	30F0467
							PREADS ASCARDS AND CHECKINA	30F 0468
								30F0469
			∓ 1 HA	1 11	12	DLANKS A	华斯多斯斯特 医自动物性 山南江 化斯勒特普勒基底	The state of the state of
10	25	3.15.46	*					30F0470
24	43.4		*	2000		Mini	· · · · · ·	30F0471
4A	0	0000	BLANK	DC	1	*-*	#69409 084 049B	30F0472
		6500UAD4		LDX	Ll	RAREB	ONE MERSEN THE CONTERES	30F0473
	ō	1810		SRA		16	The second secon	30F0474
		D4000894		STO		LOOP	SET FOT NO LOOP	30F0475
				851	-	READR	READ ONE CARD	30FU476
οU	U.	4018	840136	0.21	23	NE AUK	REND DITE CHILD	30F0477
			**************************************			COLCE	CHECK ECO OF AND CADO	
_	O1	668008AC		LDX	12	COLCT	CHECK FOR BLANK CARD	30F04780
51	01							
		ileywana ben	erentaan.	1971	10 B. V.	r - 1978 in	東一貫大京都 有名的复数	5762 - 1991 -
		1874266 033	PARTITION OF THE STATE OF THE S			: 3 P.P.V. 3 m DV66	· 国民管理 中央管理部	PROG

PART NO. 2191224

030F-0

30F04890 075B 0 0000 FEED DC 30F04900 0750 01 44000942 BSI L READY SET FOR NO LCOP 30FU4910 075E 01 D4000894 STO L LOUP 30F04920 0760 01 650009DC LDX L1 AFD 30F04930 STX L1 OP 0762 01 6D00089A 1 0 SET INTRPT DSW S/B 30F04940 0764 0 6100 LDX SET FOR NO COL INTRPTS STX L1 COLCT+1 30F04950 0765 01 6D0008AD FEED A CARD FDACD-1 30F04960 0767 C U81C XIO WAIT FOR INTERRUPT 30F04970 0768 01 4400U8AF BSI L WAIT BSC I FEED 30F04980 076A 01 4C800756 30F04990 *** *** *** *** *** *** *** *** *** * 30F05C00 READ A CARD 30F05010 30F05020 ************ * THIS SUBROUTINE WILL READ A CARD THEN CHECK THAT 30F05030 * 80 COLUMNS WERE READ AND CHECK THE BUSY, INTRPT, 30F05040 30F05050 * AND OPERATION COMPLETE DShS. 30F05060 30F05070 076C 0 0000 READR DC 30F05080 076D 01 6D000904 STX L1 READ SET READ BUFFER ADDRS 30F05090 30F05100 LDX 3 80 076F 0 6350 STX L3 COLCT+1 30F05110 SET COL COUNT S/B 0770 01 6F0008AD 30F05120 0772 0 1011 SLA - 17 FLIPS RESET FLIP Sh 30F05130 0773 0 D018 STO 30F05140 0774 01 44000942 BSI L READY 30F05150 30F05160 0776 01 650009D5 LDX L1 ARD STX L1 OP 30F05170 0778 01 6D00089A SET INTRPT DSW S/B LDX L1 /8003 30F05180 077A 00 65008003 30F05190 077C 0 0809 XIC RDRST-1 START THE READER 077D 01 440008AF BSI L. WAIT 30F05200 30F05210 BSC I READR 30F05220 077F 01 4C80076C RETURN 30F05230 30F05240 0782 0000 BSS E 0 0782 1 0719 SNSWS DC RT7SW READ BIT SWS 30F05250 /3A00 30F05260 0783 0 3A00 DADRS DC 30F05270 0784 0 0000 FDACD DC /1402 FEED A CARD 30F05280 0785 0 1402 30F05290 PDATA DC PUNCH ADDRS BUFFER 0786 0 0000 *-* 0787 0 1494 RDRST DC /1404 START READER 30F05300 0788 0 FFFF TERM DC /FFFF 30F05310 PCHST DC START PUNCH 30F05320 /1401 0789 0 1401 NCOL DC COL PUNCH CR COMPARE CNT 078A 0: 0000 ***-*** 30F05330 /1480 SELECT =2 STACKER 30F05340 STACK DC 078B 0: 1480 0780 0 0000 FLIPS DC *-* FLIP SW 30F05350 30F05360 ************** 30F05370 PUNCH A CARD 30F05380 ************** 30F05390 * THIS SUBROUTINE WILL PUNCH A CARD THEN CHECK 30F05400 សម៌ស្ថា ២៩ មកព្យៈស្នេក្ស * THAT THE PROPER NUMBER OF COLUMNS WERE PUNCHED, 30F05410 * AND CHECK THE BUSY, INTERRUPT, AND OPERATION 30F05420 * COMPLETE DSWS. 30F05430 30F05440 30FU5450

DATE TO 2 JAN 66 TO 1 MAY 66 TO 1 5 NOV 66 TO LEVE TO DE TOUT TO THE EC NO. 415490 4154908 419643

PNCHR DC. 5

078D 0 0000

PROG ID 030F-0

30F05460

PART NO. 2191224 PAGE 5

1442 READER/PUNCH FUNCTION TEST

	3 4 5 5 c	+44.5	: 6		¥ 0.44	
	e stale		. 14.		9.80 p. 1.4	
	6F0008AD	#+1 + 2	STK	13	COLCT+1	SET COL COUNT S/B
		*	3 ()	LJ	CULCITI	321 602 60011 370
	(4000043		0 6 1		DEADY	第二章 1000年 (1965年 1967年)
	44000942	PNC H1		L	READY	
0	08F 7	4	XIO.		STACK-1	SELECT STACKER 2
		* ,	41.75		and the second	
01	C40008AD		LU	L	COLCT+1	\$1\$ C 11\$ E
	DOF4		STO		NCOL	SET PUNCH COL COUNT
	COED		LD		DADRS	SET FOR START CF
					PDATA	NEXT PATTERN
	DOEE		STO			MEXI PATTERN
	650009D8				APCH	
01	6D00089A			Ll		
. 00	65004003		LDX	Ll	/4003	SET INTRPT DWS S/B
0	08E9		XID		PCHST-1	START THE PUNCH
	440008AF		851	L	WAIT	WAIT FOR INTERRUPTS
. ••	1100000	*		_		
	45000700	•	oce		DNCHD	the second second second
01	4C80C78D		D 2 f	4 ,	PNCHR	
		* .				
		***	***	***	*****	*******
	100	#			COMPARE	DATA READ
		***	****	* * *	*****	*******
		# THI	S SUB	R GU	TINE WILL	. CCMPARE THE DATA READ WITH
						FOR THAT CARD.
		±				
		±			*,	
		•	0.0		2 2	
0	0000	COMPR		_	*-*	
0	6BE5		STX		NCOL	SET NUMBER OF COLUMNS
00	67007401		LDX	L3	/7401	SET FOR POSITIVE INCR
	6812		STX	3	INCR	
	CODB		LD.		DADRS	SET FOR START OF
			STC		PDATA	NEXT PATTERN
	DODC					HEAT THITENN
	1011		SLA		17	
01	D4000884		STO	L	M	SET FOR FIRST ERROR
0	6101		LDX	1	1	XR1=COLUMN CCUNT
		*				
01	600006AE	COM 1	STX	1.1	COL	SAVE COL COUNT
		COMI			PDATA	LD NEXT DATA WGRD
	C4800786		LD	1		
0	1803		SRA		3	8 W
0	1003		SLA		3	•
	D40008AB		STO	L	DATA+1	SAVE IN DATA S/B
	F500UA83		EOR		RAREA-1	COMPARE WITH DATA READ
	_					BR IF ERROR
	44200851		851	L	-	
	14010786	INCR			PDATA,1	ADV DATA ADRS
0	7101		MDX	1	1	ADV COLUMN COUNT
0	1000		NOP		e was to the second	
	C4800786		LD .	I	PDATA	CK FOR DATA TABLE
			EUR	•	TERM	TERMINATOR
	FOC7					
	4C2007C6		BSC		CDM2 • Z	BR IF NC TERM
01	67000A33		LDX		MAREA	RESET TO START
0	6BCO		STX	. 3	PDATA	OF TABLE
		*				
	C40008AE	COM2	LD	ı`	COL	CHECK FOR LAST COL READ
n 1		CUMZ				CHECK TON END! OUR NERD
	940008AC		S	L	COLCT	DO TE LAST CC
3 01	4C1007E2		BSC	L	COM4,-	BR IF LAST COL
01 01			MDX	L	NCOL,-1	COUNT COLUMNS SHOULD
01	74FF 078A		MDX		COM1	HAVE READ
01 01 01				vi.		
01 01 01	74FF078A 70DF	* * * * * * * * * * * * * * * * * * * *			FLIPS.0	CK FLIP SW
01 01 01 0	70DF	-	MOV			
01 01 01 0	70DF 7400078C	* COM3	MDX	L		
01 01 01 0	70DF	COM3	X GM	. L	COM5	ER IF FLIP
01 01 01 0	70DF 7400078C	-				
01 01 0 0 01 0	70DF 7400078C 7015	COM3				THE REST OF CARD
01 01 01 0 01 0	70DF 7400078C 7015	COM3	MD X SLA		COM5	THE REST OF CARD
01 01 01 0 01 0	70DF 7400078C 7015 1011 D40006AB	COM3	MDX SLA STO	Ĺ	COM5 17 DATA+1	
01 01 0 01 0 01 0	70DF 7400078C 7015 1011 D40006AB 6D00G8AE	COM3	SLA STO STX	Ĺ L1	COM5 17 DATA+1 COL	THE REST OF CARD
01 01 01 0 01 0 01 01 01	7400078C 7015 1011 D40006AB 6D0008AE F5000A83	COM3	SLA STO STX ECR	Ĺ L1 L1	COM5 17 DATA+1 COL RAREA-1	THE REST OF CARD SHOULD BE ZERO
01 01 01 0 01 0 01 01 01	7400078C 7015 1011 D40006AB 6D0008AE F5000A83	COM3	SLA STO STX	Ĺ L1 L1	COM5 17 DATA+1 COL	THE REST OF CARD SHOULD BE ZERO
3 01 4 01 5 01 6 01 6 01 7 01 9 01	7400078C 7015 1011 D40006AB 6D0008AE F5000A83 44200851	COM3	SLA STO STX ECR BSI	L L1 L1	COM5 17 DATA+1 COL RAREA-1 ERR9, Z	THE REST OF CARD SHOULD BE ZERO
01 01 01 0 01 01 01 01	70DF 7400078C 7015 1011 D40006AB 6D0008AE F5000A83 44200851 7101	COM3	SLA STO STX ECR BSI MDX	i 11 11 1	COM5 17 DATA+1 COL RAREA-1 ERR9, Z	THE REST OF CARD SHOULD BE ZERO
01 01 0 01 0 01 01 01 01 01	7400078C 7015 1011 D40006AB 6D0008AE F5000A83 44200851 7101 C40006AE	COM3	SLA STO STX ECR BSI MDX LD	L L1 L1 L	COM5 17 DATA+1 COL RAREA-1 ERR9, Z 1 COL	THE REST OF CARD SHOULD BE ZERO
	70DF 7400078C 7015 1011 D40006AB 6D0008AE F5000A83 44200851 7101	COM3	SLA STO STX ECR BSI MDX	i 11 11 1	COM5 17 DATA+1 COL RAREA-1 ERR9, Z	THE REST OF CARD SHOULD BE ZERO

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

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1442 READER/PUNCH FUNCTION TEST

			New York				tach a		
	07E2	o i	1011	CDM4	SLA		17		30F06150
			D4000664	•	STO	L	M	RESET MULT LINE CONTROL	30F06160
			4C80U7A3		BSC	ī	COMPR	202	30F06170
	UIES	UI,	4C8007A3	⊅ *: * * *	D 3C	•	ST T		30F06180 _
								SET TO COMPARE LAST	30F06190
			67000AAB	C DM 5	I.DX		RAREA+39		30F06200
	07E9	-	6 b 9 C		STX	_	PDATA	HALF WITH 1ST HALF	and the second second second
	07EA	0υ	670074FF	*	LDX		/74FF	SET FOR NEGATIVE INCR	30F06210
	O7EC	O	6BCD		STX	3	INCR		30F06220
	O7ED	0	6228	1.0	LDX	2	40	CEMPARE NEXT	30F06230
	07EE	0	6A9B		STX	2	NCOL	40 COLUMNS	30F06240
	07EF		7.0BE		MDX		COMI		30F06250
	OIL.	•		*					30F06260
					****	***	****	******	30F06270
				*			LOCK EN FUI		30F06280
								*******	30F06290
					***	***	*****	*****	
				*					30F06300
	C7F0	0	0000	LOCK	DC		*-*		30F06310
	07F1	01	C40005DF		FD.	L	SWO	LD SWO	30F06320
	07F3	00	EC800166		OR	I	ERLCK	COMB WITH MONITOR SWO	30F06330
	07F 5		100A		SLA		10	CHECK LCCK SW	30F06340
			4C9007FC		BSC	I	LOCK	BR IF NCT LOCK ON FUNC	30F06350
			C4000894		LD	Ĺ	L002	LOAD LCCP ADDRS	30F06360
					BSC	ī	L003, Z	LOGP ON LAST FUNC	30F06370
			4CAU 0894					IF LOOP ADDRS IS NOT ZERD	
	OFF	01	4C8007F0		BSC	I	LOCK	IF EDUF ADDRS 15 NOT ZERO	30F06390
				*					
				****	***	***		*****	30F06400
				*			ERROR MESS		30F06410
				*** ***	****	* * *	*****	******	30F06420
				* * * * * * *					30F06430
	07FE	n	6100	ERRO	LDX	1	0	CARE NCT BLANK	30FU6440
	07FF		6200	• • • • • • • • • • • • • • • • • • • •	LDX		/0000	***	30F06450
					LDD	-	MSGO		30F06460
	0800		C86D				OPMSW		30F06470
-			6C000890		STX			DOTAT FOR MCC	30F06480
			44000886		BSI	L	ETYPE	PRINT ERR MSG	
	0805	01	40000748		BSC	L	BLANK+1		30F06490
				*					30F06500
	0807	0	0000	ERR 1	DC		*-*	STATIC CSW ERROR	30F06510
	0808	01	74000885		MDX	L	ERR5S,0	IF PREVIOUS ERRS	30FU6520
	C80A	0	7006		MDX		ERR1A	DC NOT PRINT THIS MSG	30F06530
	080B		6101		LDX	1	1		30F06540
	0800		6203		LDX		/3		30F06550
					F.D.D	-	MSG1		30F06560
	080D		C862						30F06570
			60006890		STX	L		DOINT COD MCC	30F06580
	0810	0	4075		BSI		ETYPE	PRINT ERR MSG	
				*					30F06590
	0811	0	1011	ERR 1A			17		30F06600
	0812	0	D072	* **	STO	1.1	ERR5S	RESET ERR5 SW	30F06610
			4C80C807		BSC	I	ERR1		30F06620
	7.77	. –		* '					30F06630
	C815	0	0000	ERR 2	DC		*- *	BUSY DSW ERRCR	30F06640
	0816	-	6102		LDX	1	2		30F06650
			620C	1.3	LDX		/c		30F06660
	0817					۔			30F06670
	0818	-	C859		LDD		MSG2	DOINT EDDOD MESSACE	30FU6680
	0819			ly in	BSI	_	ETYFE	PRINT ERROR MESSAGE	
	081A	01	4C80C815		BSC	1	ERR2		30F06690
				*			* a		30F06700
	081C	0	0000	ERR4	DC		*-*	INTRPT O DSW ERROR	30F06710
			F40008A7		EOR	L	DSWSB	RESTORE DSW WAS	30F06720
			D400C8A6		STO	Ł	DSWO		30F06730
	0821		6104		LDX		4		30F06740
	0822	10.7	6230		LDX		/30		30F06750
				v	LDD	-	MSG4		30F06760
	0823		C852					DOTAT EDD MCC	30F06770
	0824		4061		BSI		ETYPE	PRINT ERR MSG	7.6 . 7 . 1 . 6
	0825	01	4C80081C		BSC	1	ERR4	•	30F06780
				*					30F06790
	0827	0	0000	ERR 5	DC		*-*	INTRPT 4 DSW ERROR	30F06800
	0828		685C		STX		ERR5S	SET ERROR 5 SW	30F06810
			660000C0		LDX	L2	/C0	SET DATA ID	30F06820
	1.47								

1442	RE	ADEK/PUNCH	FUNCT IC	N TES	Ť			
082B	O	FC7C		EOR		DSn4	GET DSW	S/B
082C	0	DO7C	• 1	STO		DSW4+1	SET IN M	SG
082D	0	CO7A		LD		DSW4		
082E	0	1002		SL.A	9	2	LCCK FCR	ERR
082F	01	4C280836	•	8 \$ C	L	ERR6.+Z	BR IF ER	R CK
0831	o	6105	•	1 DX	1	5		

082B	O	FC7C		EOR		DSn4	GET DSW S/B	30F06830
082C	0	DO7C	* 1	STO		DSW4+1	SET IN MSG	30F06840
082D	0	CO7A		LD		DSW4		30F06850
082E	0	1002		SL.A		2	LCCK FCR ERR CK	30F06860
082F	01	40280836		8 \$ C	L	ERR6.+Z	BR IF ERR CK	30F06870
			*					30F06860
0831		6105		LDX	1			30F06890
0832		C 845		LDD		MSG5		30F06900
0833		4052		5 S I	_	ETYPE	PRINT ERR MSG	30F06910
0834	01	40800827	ERR5R	BSC	1	ERR5		30F06920
0034	,	C07/1	≠ ERR6			DENER	CK FOR PUNCH OPERATION	30F06930 30F06940
0836		C07U 4C08G845	EKKD	LD BSC		DSWSB ERRT.+	BR IF NOT PUNCH	30F06950
		00000904		XIÛ	L	READ	RD ECHO BITS	30F06960
		C4800904		LC	ī	READ	ND ECHE BITS	30F06970
		46180845			i		BR IF NCT PUNCH CK	30F06980
083F		D062		STO	-	DSw	STO ECHC IN MSG	30F06990
C840		6106		LDX	1	6		30F07000
C841		6203		LDX		/3		30F07010
0842		C837		LDD		MSG6		30F07020
0843	0	4042		BSI		ETYPE	PRINT ERR MSG	30F07030
0844	0	7UEF		MDX		ERR5R		30F07040
			*					30F07050
0845	0	6107	ERR 7	LDX	1	7	ERR CK	30F07060
0846		C835		LDD		MSG7		30F07070
0847	0	403E		851		ETYPE	PRINT ERR MSG	30F07080
0848	0	70EB		MDX		ERR5R		30F07090
			*					30F07100
0849		0000	ERR8	DC		*-*	COL COUNT ERROR	30F07110
084A		6108		LDX	. 1			30F07120 30F07130
		66000C00			LZ	/C00 MSG8		30F07140
084 D 084 E		C830 4037		BSI		ETYPE	PRINT ERR MSG	30F07150
		4C800849		BSC	1		FRINT ENR 1130	30F07160
0041	O1	4000047		036	•	CRRO		30F07170
0851	0	0000	ERR 9	DC		*-*	DATA CEMPARE ERROR	30F07180
0852		F058	2	EOR		DATA+1	RESTORE TO DATA WAS	30F07190
C853		D056		STO		DATA		30F07200
0854		690D		STX	1	RX1+1	SAVE XRI	30F07210
0855	0	10A0		SLT		32		30F07220
0856	00	66009300		LDX	L2	/9300	SET FOR MULTI LINE MSG	30F0 7 230
		74000884		XGM	L		CHECK FOR MULTI LINE	30F07240
085A		7005		MDX		ERR9A	BR IF FIRST LINE	30F07250
0858		6828		STX		M	SET MULTI LINE WCRD	30F07260
C85C		6109		LDX		9	MESSAGE NUMBER	30F07270
		66001300		LDX	LZ	/1300	SET WORD CNTL	30F07280
085F		C 820	50004	LDD		MSG9	EDDED TYPE OUT	30F07290 30F07300
0860		4025	ERR 9A RX1			ETYPE	ERROR TYPE OUT RESTORE XR1	30F07310
		65000000 0C00076A	KVI	LD).	L		SELECT ERROR CARD	30F07320
		4C80G851		BSC	ī	ERK9	RETURN	30F07330
0000	U 1	1000001	*	224	•			30F07340
0867	0	0000	ERR 10	DC		*-*	Control of the Contro	30F07350
0868		6110		LDX	1	/10	Contain property and the grant for the con-	30F07360
0869		6240		LDK		740		30F07370
086A		C817		LDD		MSG10		30F07380
C868		401A		BSI		ETYPE	F 81 356/98/	30F07390
		40800867		BSC	1	ERRIC	- Part - Cir - Protest - ED	30F07400
20.00			*	0 8 8 E		(1) 	THE REPORT OF STREET	30F07410
alice of To		40 000 mg	*	ALPH	A MI	ESSAGE ADD	RESSES	30F07420
eray n	· ·	: 3v	*	ra uri	_	N.2. 8, 218	The second secon	30F07430
086 E	17 (0000	1.11.23	BSS	£	0	- केटन सर्वे अनुसन्दर्भ केटन केटन केटन	30F07440
086E	1	0976	MSGO	DC		ACNBK	CARC NOT BLANK	30F07450
086F	0	0000		DC	19.	0000	TEU COS COMESTAS	30F07460
	1	097E	MSG1	DC		AWAS	人名英格兰 化二二二二二二二二二二二二二二二二二二二二二二二二二二二二二二二二二二二二	30F07470
0870		0004		20				
C871	1	098A	MSC3	DC		ASDSW		30F07480 30F07490
	1	097E	MSG2	ĐC		ASDSW AWAS ABDSW		30F07480 30F07490 30F07500

ECATE 12 (E 02 JAN 66 e 0 0 1 MAY 66 e 1 5 NOV 66 EC NO. 415450 415450 419643 1945 FIRM TARIES PAGE TO STORES

222			ه کا که ده					30F07510
0874	-	09A3	MSG3	DC		ANINT		30F07520
0875		09AB	2 22 2	DC		ALV4		30F07520
0876		097E	MSG4	DC		AWAS		30F07540
0877		0A05		DC		ADSWO		
0878		097E	MSG 5	DC		AWAS		30F07550
0879	1	099B		DC		ADSW4		30F07560
087A	1	097E	MSG 6	DC		AWAS		30FU7570
0878	1	U983		DC		APCK		30F07580
087C	1	U97E	MSG 7	DC		AWAS		30F07590
087D	1	0989		DC		AECK		30F07600
087E	1	0983	MSG 8	.DC		ADWAS		30F07610
C87F	1	093E		DC		ACCNT		30F07620
0880	1	097E	MSG9	DC		AWAS		30F07630
0881	1	0905		DC	•	ADATA		30F07640
0882	1	0943	· MSG10	DC		ANINT		30F07650
0883	1	09AF		DC .		ALVO		30F.07660
0884	0	0000	M	DC		* - =	MULTI LINE CONTROL WORD	30F07670
0885		0000	ERK5S	DC		*-×	ERR5 SW	30F07680
	_		*	7.7				30F07690
			****	****	* **	******	*****	30F07700
			*				DR MESSAGE	30F07710
				****	**		******	30F07720
			*				TS ALL THE ERROR MESSAGES.	30F07730
			*				G NO. MUST BE SET IN XRI.	30F07740
			*				2, AND THE ALPHA ADDRS IN	30F07750
			-			UM AND EXT		30F07760
			*		ACC	OH AND EAT		30F07770
			+				•	30F07780
	_		*	0.0		*-*		30F 07790
C886		0000	ETYPE				MCC NUMBER	30F07800
C887		6915		STX	_	TABLE	MSG NUMBER	30F07810
C888		6A16		STX	- 2	TABLE+2	DATA ID	
0889	0	D816		STD		AMSG	ALPHA MESSAGE	30F07820
			*		٠.	22.4.2		30F07830
A880	01	74000890		MDX	L	OPMSW	PRINT LAST OP MSG IF	30F07840
088C	0	7004		MDX		ETYP1	FIRST ERROR MSG AFTER	30F C 7850
088D	00	44800162		BSI	I	ERROR	A CONTROL OP	30F07860
088F	1	0896		DC		ETYP2		30F07870
0890	0	0000	OPMSW	DC		*-*	MUST BE ZERO FOR OP MSG	30F07880
			*					30F078 9 0
0891	00	44800162	ETYP1	BSI	I	ERKOR	PRINT ERROR MESSAGE	30F0 7 900
C893	1	089D	1.0	DC		TABLE		30F0 79 10
C894		0000	LOOP	DC		*-*	· ·	30F07920
C895		68FA		STX		JPMSW		30F07930
	, T	2 Table 1	*					30F07940
0896	01	40800886	E TYP2	BSC	I	ETYPE	RETURN	30F07950
0070	-	100000	*		-			30F07960
C898	a	8000		DC		/8000		30F07970
0899		09CF		DC		ALOP		30F07980
089A		0000	OP	DC		*-*		30F07990
UOTA	U	0000	*	<i>D</i> C		• •		30F08000
			*	· 				30F08010
			*	EDDO	1D M	ECCAPE TABL	E	30F08020
			*	EKKL	IK ITI	ESSAGE TABL	<u>. </u>	30F08030
00.00		0001	4					
C89C	_	0001	** ** * * * * *	BSS	, E .		MECCACE MIMOCO	30F08040
089D		0000	TABLE			*-*	MESSAGE NUMBER	30F08050
089E		1000		DC		/1C00	HEX/DECIMAL SW	30F08060
C89F		0000		DC	- 's :	*-*	DATA WORD ID	30F08070
08A0		0000	AMSG :		Α,	*-*	ALPHA ADDRS 1	30F08080
08A1	U	0000		DC	7	***	ALPHA ADDRS 2	30F08090
11.50	, 15	ers for some	*	1984	11.0	3 45 3 4	TO BE STONE OF THE CARD CARDON	30F08100
08A2	0	0000	DS₩	DC	10	*-*	STATIC DOW WAS	30F08110
08A3		0000	ZERO	DC	15 1	/0000	S/B	30F08120
		0000	BDS	DC		*-*	BUSY D'SH WAS	30F08130
C8A4				DC		/0003	S/B	30F08140
C8A4		0005			- 5	A CARLON AND AND AND ADDRESS OF THE		The second second second
08A5	C	0003		DC.	£ 1	·**	INI U USH MAS	20100120
08A5 08A6	C	0000	DSWO	DC DC		, =-= : *-=	INT O DSW WAS	30F08150 30F08160
08A5 08A6 08A7	C 0 0	0000	DSWO DSWSB	DC	ř,		S/E	30F08160
08A5 08A6	C O C	0000	DSWO		ř ,	*-*		the first of the second second

feels acommontable environ sess DATE 02JANGG 01MAYGG 15N0VGG EC NG. 415490 415490B 419643 File NS. (15EMPERS HERMHORZES BESSONME ACK THE SESSE RABLES

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1442 READER/PUNCH FUNCTION TEST

A 0	0000	DATA	D.C.		*-*	DATA READ WAS S/B COLUMN COUNT WAS	30F08190 30F08200
		DATA	DC.	1	****	1 at a 1 at a 5/8	30F08200
BO			20			COLUMN COUNT HAS	30500210
C O	0000	COLCT	UL		+- +	CULUMN COUNT WAS	30F08210 30F08220 30F08230
	0050	2.1	DC		80	S/B COLUMN IN ERROR	30108220
E O	0000	COL	DC		*-*	COLUMN IN ERROR	30F08230
		***	100		rode recording	SERVICE SERVICE SERVICES AND PROPERTY.	30F08240
		*****	*****	***	*****	*****	30F08250
		*******			TRITEDDILOT	WAIT ROUTINE	
							30F08260 30F08270
		***	. 		· · · · · · · · · · · · · · · · · · ·	*****	30500210
		¢	THIS	SU	BROUTINE WA	ITS FOR INTERRUPT. IS RECEIVED IT WILL SELECTION SWITCH. AS BEEN SELECTED IT CONTROL ROUTINE.	30F08280
		*	WHEN	Thi	E I'NTERRUPT	IS RECEIVED IT WILL	30F08290
		*	CHECK	K TH	HE ROUTINE	SELECTION SWITCH.	30F08300
		*	IF A	NE	ROUTINE H	AS REEN SELECTED IT	30F08310
		i		00	ANCH TO THE	CONTROL PROTEINE	30F08310 30F08320
		•	MILL	DK.	ANCH IC THE	CONTROL ROOTTAL.	30500320
		*					30F08330 30F08340
		*			to the contract of the contrac		30508340
F O	0000	WAIT	DC		*- *		30F08350
υŌ	0000 69F6			1	DSWSB	SAVE INT O DSW S/B	30F08360 30F08370 30F08380
	65001000				/1000	SET INTERRUPT	30F08370
						WAIT CNT	30F08380
3 0	695C		SIX	1	WCNT		201.00200
4 0	0851		X [O		SENSE	SENSE BUSY DSW	30F08390
5 U	DOEE		STO		BDSW		30F08400
60	1011		SLA		17	$(a,b) = a_{ab} + \cdots + a_{ab} + \cdots + a_{ab} + \cdots$	30F08410
7 0	DOF4		STC		COLCT	RESET CCL CCUNT	30F08420
			C 700			RESET INT O DSW ERR BITS	
8 0	D056		S 70		EDII3		
9 0	DOD6				DPMSW	RESET OP MSG SW	30F08440
		*	14.07				30F08450
A 01	650008C3	WAITI	LDX	Ll	WAIT3		30F08460
	740005E6		MDX	ī	MLSCF+1	CK FOR INTERRUPT	30F08470
	7016		MDX	-	WAIT4	BR IF INTERRUPT CCCURED	30F08480
E O	1010		MINY		MALIA	DE TENTIFICACIONED	30F08490
		*					
F : 01	600005E5	WAIT2	STX	Ll		SET RETURN ACDRESS GO TO MCNITOR	30F08500
1 00	44800161		BSI	1	START	GO TO MENITOR	30F08510
	* *	*			*		30F08520
2 01	74FF C910	∆IT2			WCNT,-1	DECREMENT WAIT CNT	30F08530
			MEX	-	WAIT1		30F08540
5 0	70F4		ITL A		MWTIT		30F08550
	· · · · ·	*				64 Bush 35	
60	CODD					CK BUSY DSW	30F08560
7 0	FODD		1 8 0		DDCHA		30F085 70
	44200815		BSI	L	ERR2,Z	BR IF ER	30F08580
A O	U83B		X10	-	SENSE	SENSE DSW	30F08590
			CTO		DSWA	STORE DOW IN MCG	30F08580 30F08590 30F08600 30F08610 30F08620
BU	DODC		310		COLCT::	CA EUD EEED UD	20500410
CO	CUEO		LU		CULCI+1	BR IF ER SENSE DSW STORE DSW IN MSG CK FOR FEED OP BR IF FEED OP	20108010
C 01	4C0808D2		BSC	L	WAT3A,+	BR IF FEED OP	30F08620
F O	CODC		LD		COLCT		30F08630
	44080867	61	BSI -	-1	FRR10.+	A Company of the Comp	30F08640
		WAT 3A	104	~,	3		30F08650
2 0	6103		LUX	1	440		2050000
30	6240				/40		3050000
4 0	C89F		LDD		MSG3		30F08670
5 0	4030 678008AF		BSI		ETYPE	PRINT ERR MSG	30F08660 30F086 7 0 30F08680
6 01	678008AF		I DX	13	WAIT	SET TO CONTINUE FUNCTION	
	6F0005E6				MLSCF+1		30F08700
0 UI	OFUUUDEO		317	LJ	HE SUL TI		30F08710
		*					
A 01	C40005E0	WAI T4	LD	L	Sw1		30F08720
00	44880161		BSI	1	START ++	CK FOR RTN SELECT CK FOR NEW ROUTINE	30F08730
	940005DD		S .	L	RID	CK FOR NEW ROUTINE	30F08740
					CNTRL .Z	BR IF NEW RTN	30F08750
	442005F8		BSI			GD TO MENITOR	30F08760
2 00	44800161	_	169	I		OU TO MENTIUM	
		*					30F08770
		*					30F08780
		# CD!	ME TO	HEF	RE FROM INT	ERRUPT AND CHECK FOR	30F08790
						NG TO TEST ROUTINE	30F08800
		- EKF	.0.0	U L F 1	SAL RETURNI		30F08810
		* -					30F08820
4 0	10A0	RTRN	SLT		32		30F08830
	COBE		LD		BDSw	CK BUSY DSW	30F08840
			EOR		BDSW+1		30F08850
0 U	F0BE 44200815					BR IF ER	30F08860
				•	rkk/a/		201-00000

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30F08870

1442 READER/PUNCH FUNCTION TEST

		*					30108870
08E9 0	C025		LD		EBITS	CK INT O DSW	30F08880
and the second s						CK 1111 O DSW	30F08890
C A380	E023 ·		AND		KEFFF		
08E6 U1	4420081C		BSI	L	ERR4,2 -	BR IF ERR	30F08900
1645	4.4.7	*			14.4 C		30F08910
OCED O	CODA				DSW4	CK INT 4 DSW	30F08920
	COBA		LD				
08EE 0	F01D		EDR		K0800 _	REMOVE RESPONSE BIT	30F08930
08EF 0	E01D		AND		KEFFE	MASK LAST CD AND NRCY	30F08940
	44200827	0.00	BSI	L	ERR5,Z	BR IF ERR	30F08950
				-			30F06960
08F2 0	COBA		ΓD		COLCT+1	CK FOR FEED CP	
08F3 U1	4C08U8FC		BSC	L	RTRN1 +	BR IF FEED OP	30F0&970
1.5		*					30F08980
0055 0	čnä4		LD		COLCT		30F08990
	C036						
08F6 01	44080867		BSI	L	ERR10,+		30F09000
08F8 0	C033		ĹD		COLCT	CK COLUMN COUNT	30F09010
	FOB3		EGR		COLCT+1	COMPARE WITH S/B	30F09020
						BR IF CCL COUNT ER	30F09030
08FA 01	44206849		BSI	L	ERR8 , Z	DK IF CLL COUNT EN	
	* *	*				**************************************	30F09040
		*					30F09050
08FC 0	COAB	RTRN1	10		DSW4	CK FOR LAST CARD	30F09060
		VIVIAT				CK TOK EAST CARD	
08FD 0	1004		SLA		4		30F09070
08FE 01	4C02095F		BSC	L	LSTCD,C	BR IF LAST CARD	30F09080
0900 01	4C8008AF		BSC	1	WAIT	RETURN TO TEST RTN	30F09090
0,00 01	100000	*	500	•			30F09100
		*		_	_		
0902	0000		BSS	Ε	0		30F09110
0902 1	090A	PUNCH	DC		PBUF	PUNCH	30F09120
	1100		DC		/1100		30F09130
					RAREA	READ	30F09140
	0484	READ	DC			REAU	
0905 Ú	1200		DC		/1200		30F09150
0906 0	0000	SENSE	DC		70000	SENSE DSW	30F09160
	1700		DC		/1700		30F09170
	-	K00.00					30F09180
	0008	K0008			/0008		
090 9 0	1701	SNR SG	DC		/1701		30F09190
090A 0	0000	PBUF	DC		*-*	PRINT DATA BUFFER	30F09200
and the second s	1702				/1702		30F09210
		SNR S4					
C90C 0	0800	K0800	DC		/0800		30F09220
C90C 0			DC				
0 3060 0 3060	0800 EFFE	KO800 KEFFE	DC DC		/0300 /EFFE		30F09220
090C 0 090C 0 090E 0	0800 EFFE EFFF	KO800 KEFFE KEFFF	DC DC DC		/0800 /EFFE /EFFF	INT O PSH ED RITS	30F09220 30F09230 30F09240
090C 0 090C 0 090E 0 090F 0	0800 EFFE EFFF 0000	KO800 KEFFE KEFFF EBITS	DC DC DC		/0800 /EFFE /EFFF *-*	INT O CSW ER BITS	30F09220 30F09230 30F09240 30F09250
090C 0 090C 0 090E 0 090F 0	0800 EFFE EFFF	KO800 KEFFE KEFFF	DC DC DC		/0800 /EFFE /EFFF	INT O CSW ER BITS	30F09220 30F09230 30F09240 30F09250 30F09260
090C 0 090C 0 090E 0 090F 0	0800 EFFE EFFF 0000	KO800 KEFFE KEFFF EBITS	DC DC DC		/0800 /EFFE /EFFF *-*	INT O CSW ER BITS	30F09220 30F09230 30F09240 30F09250
090C 0 090C 0 090E 0 090F 0	0800 EFFE EFFF 0000	KO800 KEFFE KEFFF EBITS WCNT *	DC DC DC DC	***	/0900 /EFFE /EFFF *-* *-*		30F09220 30F09230 30F09240 30F09250 30F09260 30F09270
090C 0 090C 0 090E 0 090F 0	0800 EFFE EFFF 0000	KO800 KEFFE KEFFF EBITS WCNT *	DC DC DC DC	***	/0900 /EFFE /EFFF *-* *-*	******	30F09220 30F09230 30F09240 30F09250 30F09260 30F09270 30F09280
090C 0 090C 0 090E 0 090F 0	0800 EFFE EFFF 0000	KO800 KEFFE KEFFF EBITS WCNT * *******	DC DC DC DC DC		/0300 /EFFE /EFFF *-* *-* 1NTRPT 0 S	**************************************	30F09220 30F09230 30F09240 30F09250 30F09270 30F09270 30F09290
090C 0 090C 0 090E 0 090F 0	0800 EFFE EFFF 0000	KO800 KEFFE KEFFF EBITS WCNT * *******	DC DC DC DC DC		/0300 /EFFE /EFFF *-* *-* 1NTRPT 0 S	******	30F09220 30F09230 30F09240 30F09250 30F09270 30F09270 30F09280 30F09290 30F09300
090C 0 090C 0 090E 0 090F 0	0800 EFFE EFFF 0000	KO800 KEFFE KEFFF EBITS WCNT * *******	DC DC DC DC DC		/0300 /EFFE /EFFF *-* *-* 1NTRPT 0 S	**************************************	30F09220 30F09230 30F09240 30F09250 30F09270 30F09270 30F09290
090C 0 090C 0 090E 0 090F 0 0910 0	0800 EFFE EFFF 0000 0000	K0800 KEFFE KEFFF EBITS WCNT * *******	DC DC DC DC DC		/0300 /EFFE /EFFF *-* *-* 1NTRPT 0 S	**************************************	30F09220 30F09230 30F09240 30F09250 30F09260 30F09270 30F09280 30F09290 30F09310
090C 0 090E 0 090E 0 090F 0 0910 0	0800 EFFE EFFF 0000 0000	K0800 KEFFE KEFFF EBITS WCNT * *******	DC DC DC DC C DC		/0300 /EFFE /EFFF *-* *-* ***************************	**************************************	30F09220 30F09230 30F09240 30F09250 30F09260 30F09270 30F09280 30F09300 30F09310 30F09320
090C 0 090E 0 090E 0 090F 0 0910 0	0800 EFFE EFFF 0000 0000	K0800 KEFFE KEFFF EBITS WCNT * *******	DC DC DC DC DC		/0300 /EFFE /EFFF *-* *-* ***************************	**************************************	30F09220 30F09230 30F09250 30F09260 30F09270 30F09280 30F09290 30F09310 30F09310 30F09320 30F09330
090C 0 090E 0 090E 0 090F 0 0910 0	0800 EFFE EFFF 0000 0000	K0800 KEFFE KEFFF EBITS WCNT * *******	DC DC DC DC C DC		/0300 /EFFE /EFFF *-* *-* ***************************	**************************************	30F09220 30F09230 30F09240 30F09260 30F09270 30F09280 30F09300 30F09310 30F09320 30F09330 30F09340
090C 0 090E 0 090F 0 0910 0	0800 EFFE EFFF 0000 0000	K0800 KEFFE KEFFF EBITS WCNT * *******	DC DC DC DC DC		/0300 /EFFE /EFFF *-* *-* ***************************	**************************************	30F09220 30F09230 30F09250 30F09260 30F09270 30F09280 30F09290 30F09310 30F09310 30F09320 30F09330
090C 0 090E 0 090E 0 090F 0 0910 0	0800 EFFE EFFF 0000 0000 0000 08F5 F093 E8FA	K0800 KEFFE KEFFF EBITS WCNT * *******	DC D		/0300 /EFFE /EFFF *-* *-* ***************************	**************************************	30F09220 30F09230 30F09240 30F09250 30F09260 30F09270 30F09280 30F09390 30F09310 30F09320 30F09330 30F09350
090C 0 090C 0 090E 0 090F 0 0910 0	0800 EFFE EFFF 0000 0000 0000 0000 08F5 F093 E8FA D0F9	K0800 KEFFE KEFFF EBITS WCNT * *******	DC D		/0300 /EFFE /EFFF *-* *******************************	**************************************	30F09220 30F09230 30F09240 30F09250 30F09260 30F09270 30F09380 30F09310 30F09310 30F09330 30F09350 30F09350
090C 0 090E 0 090E 0 090F 0 0910 0	0800 EFFE EFFF 0000 0000 0000 0855 F093 E8FA D0F9 F090	K0800 KEFFE KEFFF EBITS WCNT * *******	DC DC DC DC DC C DC DC T T T T T T T T T		/0900 /EFFE /EFFF *-* *-* ***************************	**************************************	30F09220 30F09230 30F09240 30F09250 30F09260 30F09270 30F09280 30F09300 30F09310 30F09310 30F09330 30F09350 30F09350 30F09350 30F09370
090C 0 090E 0 090E 0 090F 0 0910 0	0800 EFFE EFFF 0000 0000 0000 0000 08F5 F093 E8FA D0F9	K0800 KEFFE KEFFF EBITS WCNT * *******	DC D		/0300 /EFFE /EFFF *-* *******************************	**************************************	30F09220 30F09230 30F09240 30F09250 30F09260 30F09270 30F09380 30F09310 30F09310 30F09320 30F09340 30F09350 30F09370 30F09370 30F09370
090C 0 090E 0 090E 0 090F 0 0910 0	0800 EFFE EFFF 0000 0000 0000 0855 F093 E8FA D0F9 F090	K0800 KEFFE KEFFF EBITS WCNT * *******	DC DC DC DC DC C DC DC T T T T T T T T T		/0900 /EFFE /EFFF *-* *-* ***************************	**************************************	30F09220 30F09230 30F09240 30F09250 30F09260 30F09270 30F09280 30F09300 30F09310 30F09310 30F09330 30F09350 30F09350 30F09350 30F09370
090C 0 090E 0 090E 0 090F 0 0910 0	0800 EFFE EFFF 0000 0000 0000 0855 F093 E8FA D0F9 F090	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC DC DC DC DC DC ******* DC X10 EOR OR STO EOR NOP	*** *	/0300 /EFFE /EFFF *-* *-* ***************************	SENSE DSW CK FOR CORRECT DSW SAVE ERROR BITS RESTORE DSW USE FOR TRAP	30F09220 30F09230 30F09250 30F09250 30F09260 30F09270 30F09280 30F09310 30F09310 30F09310 30F09340 30F09350 30F09360 30F09370 30F09370 30F09390
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0	0800 EFFE EFFF 0000 0000 0000 0000 08F5 F093 E8FA D0F9 F090 1000 740108AC	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC DC DC DC DC DC DC ******* DC XIO EOR OR STG EOR NOP	• * * :	/0300 /EFFE /EFFF *-* ******************************	**************************************	30F09220 30F09230 30F09250 30F09250 30F09260 30F09270 30F09280 30F09310 30F09310 30F09320 30F09340 30F09350 30F09370 30F09370 30F09370 30F09390 30F09390
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0917 0	0800 EFFE EFFF 0000 0000 0000 0855 F093 E8FA D0F9 F090 1000 740108AC 4C280932	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC DC DC DC DC DC DC ******* DC XIO EOR OR STG EOR NOP	: * * :	/0300 /EFFE /EFFF *-* *-* *************************	**************************************	30F09220 30F09230 30F09240 30F09260 30F09260 30F09280 30F09300 30F09310 30F09310 30F09340 30F09350 30F09370 30F09370 30F09370 30F09370 30F09390 30F09400 30F09410
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0917 0	0800 EFFE EFFF 0000 0000 0000 0855 F093 E8FA D0F9 F090 1000 740108AC 4C280932	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC DC DC DC DC DC ******* DC XIO EOR OR STG EOR NOP	• * * :	/0300 /EFFE /EFFF *-* ******************************	**************************************	30F09220 30F09230 30F09250 30F09250 30F09260 30F09270 30F09280 30F09310 30F09310 30F09320 30F09340 30F09350 30F09370 30F09370 30F09370 30F09390 30F09390
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0	0800 EFFE EFFF 0000 0000 0000 0855 F093 E8FA D0F9 F090 1000 740108AC 4C280932 C4800786	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC DC DC DC DC ******* DC XIO EOR STG EOR NOP MOX BSC LD	L L I	/0900 /EFFE /EFFF *-* ******************************	**************************************	30F09220 30F09230 30F09240 30F09260 30F09260 30F09270 30F09280 30F09300 30F09310 30F09320 30F09330 30F09340 30F09370 30F09370 30F09390 30F09390 30F09400 30F09410 30F09420
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0	0800 EFFE EFFF 0000 0000 0000 0000 08F5 F093 E8FA D0F9 F090 1000 740108AC 4C280932 C480C786 74FF C78A	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC DC DC DC DC ****** DC XIO EOR OR STG EOR NOP MD X B SC LD MD X	: * * :	/0300 /EFFE /EFFF *-* ******************************	**************************************	30F09220 30F09230 30F09250 30F09260 30F09260 30F09270 30F09300 30F09310 30F09320 30F09340 30F09350 30F09370 30F09370 30F09370 30F09370 30F09370 30F09370 30F09370
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0	0800 EFFE EFFF 0000 0000 0000 0855 F093 E8FA D0F9 F090 1000 740108AC 4C280932 C480C786 74FF C78A	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC DC DC DC DC C DC DC ****** ****** DC XIO EOR OR R NOP MD X B SC L D MD X MD X MD X	L L I	/0300 /EFFE /EFFF *-* *-* *************************	SENSE DSW CK FOR CORRECT DSW SAVE ERROR BITS RESTORE DSW USE FOR TRAP ADV CGLUMN COUNT CK RDR IF BO — LD PUNCH DATA CK FOR LAST COL	30F09220 30F09230 30F09250 30F09250 30F09260 30F09270 30F09380 30F09310 30F09310 30F09340 30F09350 30F09370 30F09370 30F09370 30F09400 30F09410 30F09420 30F09430 30F09440
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0	0800 EFFE EFFF 0000 0000 0000 0855 F093 E8FA D0F9 F090 1000 740108AC 4C280932 C4800786 74FF C78A 7001 E8E6	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC DC DC DC DC DC ****** DC X10 EOR OR STG EOR NOP MOX BSC LD MDX MDX UR	L L I	/0300 /EFFE /EFFF *-* *-* *************************	**************************************	30F09220 30F09230 30F09250 30F09250 30F09260 30F09270 30F09280 30F09310 30F09310 30F09310 30F09350 30F09350 30F09370 30F09370 30F094930 30F094930 30F09450
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0	0800 EFFE EFFF 0000 0000 0000 0855 F093 E8FA D0F9 F090 1000 740108AC 4C280932 C480C786 74FF C78A	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC DC DC DC DC C DC DC ****** ****** DC XIO EOR OR R NOP MDX BSC LD MDX MDX MDX	L L I	/0300 /EFFE /EFFF *-* *-* *************************	SENSE DSW CK FOR CORRECT DSW SAVE ERROR BITS RESTORE DSW USE FOR TRAP ADV CGLUMN COUNT CK RDR IF BO — LD PUNCH DATA CK FOR LAST COL	30F09220 30F09230 30F09240 30F09260 30F09270 30F09280 30F09390 30F09310 30F09320 30F09340 30F09350 30F09360 30F09360 30F09360 30F09370 30F09390 30F09400 30F09410 30F09430 30F09440
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0	0800 EFFE EFFF 0000 0000 0000 0000 0000	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC DC DC DC DC DC ****** DC XIO EOR OR STG EOR NOP MDX BSC LD MDX MDX UR STO	L L I	/0300 /EFFE /EFFF *-* *-* *************************	**************************************	30F09220 30F09230 30F09240 30F09260 30F09270 30F09280 30F09300 30F09310 30F09310 30F09340 30F09350 30F09350 30F09370 30F09370 30F09370 30F09400 30F09410 30F09420 30F09450 30F09460
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0	0800 EFFE EFFF 0000 0000 0000 0000 0855 F093 E8FA D0F9 F090 1000 740108AC 4C280932 C4800786 74FF C78A 7001 E8E6 B8E6 D0E7 08DE	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC D	L L I L	/0900 /EFFE /EFFF *-* *-* *************************	**************************************	30F09220 30F09230 30F09240 30F09260 30F09260 30F09270 30F09280 30F09300 30F09310 30F09310 30F09350 30F09350 30F09370 30F09370 30F09370 30F09470 30F09450 30F09450 30F09450 30F09450 30F09450 30F09470
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0 0918 01 0916 01 0916 01 0912 0 0920 0 0921 0 0922 0 0923 0 0924 01	0800 EFFE EFFF 0000 0000 0000 0000 0000	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC D	L L I L	/0300 /EFFE /EFF *-* *-* **************************	******************* SERVICE ROUTINE ******************** SENSE DSW CK FOR CORRECT DSW SAVE ERROR BITS RESTORE DSW USE FOR TRAP ADV CCLUMN COUNT CK RDR IF BO — LD PUNCH DATA CK FGR LAST COL SET PUNCH TERMINATOR STO PUNCH DATA IN BUFFER PCH A CCLUMN INCREASE PCH ADDR	30F09220 30F09230 30F09250 30F09260 30F09260 30F09270 30F09300 30F09310 30F09320 30F09320 30F09340 30F09340 30F09360 30F09370 30F09360 30F09410 30F09410 30F09410 30F09420 30F09450 30F09460 30F09460 30F09460 30F09460
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0 0918 01 0918 01 0918 01 0918 01 0912 0 0921 0 0922 0 0923 0 0924 01 0926 01	0800 EFFE EFFF 0000 0000 0000 0000 0000	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC D	L L I L	/0900 /EFFE /EFFF *-* *-* *************************	******************* SERVICE ROUTINE ******************** SENSE DSW CK FOR CORRECT DSW SAVE ERROR BITS RESTORE DSW USE FOR TRAP ADV CCLUMN COUNT CK RDR IF BO — LD PUNCH DATA CK FOR LAST COL SET PUNCH TERMINATOR STD PUNCH DATA IN BUFFER PCH A CCLUMN INCREASE PCH ADDR LD NEXT PUNCH DATA	30F09220 30F09230 30F09240 30F09260 30F09260 30F09270 30F09280 30F09300 30F09310 30F09310 30F09350 30F09350 30F09370 30F09370 30F09370 30F09470 30F09450 30F09450 30F09450 30F09450 30F09450 30F09470
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0 0918 01 0918 01 0918 01 0918 01 0912 0 0921 0 0922 0 0923 0 0924 01 0926 01	0800 EFFE EFFF 0000 0000 0000 0000 0000	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC D	L L I L	/0300 /EFFE /EFF *-* *-* **************************	******************* SERVICE ROUTINE ******************** SENSE DSW CK FOR CORRECT DSW SAVE ERROR BITS RESTORE DSW USE FOR TRAP ADV CCLUMN COUNT CK RDR IF BO — LD PUNCH DATA CK FGR LAST COL SET PUNCH TERMINATOR STO PUNCH DATA IN BUFFER PCH A CCLUMN INCREASE PCH ADDR	30F09220 30F09230 30F09250 30F09260 30F09260 30F09270 30F09300 30F09310 30F09320 30F09320 30F09340 30F09340 30F09360 30F09370 30F09360 30F09410 30F09410 30F09410 30F09420 30F09450 30F09460 30F09460 30F09460 30F09460
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0 0918 01 091C 01	0800 EFFE EFFF 0000 0000 0000 0000 0000	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC D	L I L L I L	/0300 /EFFE /EFFF *-* *-* *************************	********************** SENSE DSW CK FOR CORRECT DSW SAVE ERROR BITS RESTORE DSW USE FOR TRAP ADV CGLUMN COUNT CK RDR IF BO — LD PUNCH DATA CK FGR LAST COL SET PUNCH TERMINATOR STC PUNCH DATA IN BUFFER PCH A CCLUMN INCREASE PCH ADDR LD NEXT PUNCH DATA CK FOR END OF TABLE	30F09220 30F09230 30F09240 30F09260 30F09270 30F09280 30F09310 30F09310 30F09320 30F09340 30F09350 30F09360 30F09370 30F09360 30F09400 30F09410 30F09410 30F09450 30F09450 30F09480 30F09480 30F09480 30F09480 30F09480 30F09490 30F09490
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0 0918 01 0916 01 091C 01 091C 01 091C 01 091C 01 0920 0 0921 0 0923 0 0924 01 0928 01 0928 01 0928 01	0800 EFFE EFFF 0000 0000 0000 0000 08F5 F093 E8FA D0F9 F090 1000 740108AC 4C280932 C4800786 740FC78A 7001 E8E6 D0E7 08DE 74010786 C4900786 F4000788 4CAU0911	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC T T T T T	L I L I L I L I	/0300 /EFFE /EFFF *-* *-* *************************	**************************************	30F09220 30F09230 30F09250 30F09250 30F09260 30F09270 30F09280 30F09310 30F09310 30F09310 30F09350 30F09350 30F09370 30F09370 30F09490 30F09490 30F09450 30F09450 30F09450 30F09470 30F09480 30F09450 30F09450 30F09480 30F09480 30F09490 30F09490 30F09500 30F09500
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0 0918 01 0916 01 0910 0 0920 0 0921 0 0922 0 0923 0 0924 01 0926 01 0928 01 0928 01 0928 01	0800 EFFE EFFF 0000 0000 0000 0000 0855 F093 E8FA D0F9 F090 1000 740108AC 4C280932 C4800786 74FF C78A 7001 E8E6 D0E7 08DE 74010786 C4900788 4CAU0911 67000A33	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC D	L L I L I L I L 3	/0900 /EFFE /EFFF *-* ******************************	**************************************	30F09220 30F09230 30F09250 30F09250 30F09260 30F09270 30F09280 30F09310 30F09310 30F09340 30F09350 30F09370 30F09370 30F09370 30F09480 30F094980 30F094980 30F09470 30F09450 30F09450 30F09470 30F09480 30F09470 30F09470 30F09480 30F09470 30F09480 30F09480 30F09470 30F09480 30F09500 30F09510 30F09520
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0 0918 01 0916 01 091C 01 091C 01 091C 01 091C 01 0920 0 0921 0 0923 0 0924 01 0928 01 0928 01 0928 01	0800 EFFE EFFF 0000 0000 0000 0000 0855 F093 E8FA D0F9 F090 1000 740108AC 4C280932 C4800786 74FF C78A 7001 E8E6 D0E7 08DE 74010786 C4900788 4CAU0911 67000A33	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC D	L L I L I L I L 3	/0300 /EFFE /EFFF *-* *-* *************************	**************************************	30F09220 30F09230 30F09240 30F09260 30F09260 30F09280 30F09300 30F09310 30F09320 30F09330 30F09340 30F09370 30F09370 30F09370 30F09410 30F09490 30F09490 30F09490 30F09470 30F09480 30F09480 30F09480 30F09480 30F09480 30F09490 30F09490 30F09490 30F09500 30F09510
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0 0918 01 0916 01 0916 01 0920 0 0921 0 0922 0 0923 0 0924 01 0928 01 0928 01 0928 01 0928 01	0800 EFFE EFFF 0000 0000 0000 0000 0000	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC D	L L I L I L I L I L I L 3 L 3	/0300 /EFFE /EFF *-* *******************************	**************************************	30F09220 30F09230 30F09250 30F09260 30F09260 30F09270 30F09300 30F09310 30F09320 30F09320 30F09350 30F09350 30F09360 30F09360 30F09410 30F09410 30F09410 30F09410 30F09480 30F09480 30F09450 30F09450 30F09450 30F09450
090C 0 090E 0 090E 0 090F 0 0910 0 0911 0 0912 0 0913 0 0914 0 0915 0 0916 0 0917 0 0918 01 0916 01 0910 0 0920 0 0921 0 0922 0 0923 0 0924 01 0926 01 0928 01 0928 01 0928 01	0800 EFFE EFFF 0000 0000 0000 0000 0000	KOBOO KEFFE KEFFF EBITS WCNT * ******** * * * * * * * * * * * * * *	DC D	L L I L I L I L 3	/0900 /EFFE /EFFF *-* ******************************	**************************************	30F09220 30F09230 30F09250 30F09250 30F09260 30F09270 30F09280 30F09310 30F09310 30F09340 30F09350 30F09370 30F09370 30F09370 30F09480 30F094980 30F094980 30F09470 30F09450 30F09450 30F09470 30F09480 30F09470 30F09470 30F09480 30F09470 30F09480 30F09480 30F09470 30F09480 30F09500 30F09510 30F09520

1442 READER/PUNCH FUNCTION TEST

1442 READER/PUNCH FUNCTION TEST

0033.0	0.601	* *	v-Tro		2540	READ COMMAND	30F09550 30F09560
0932 0	08D1 74016964	CKRDK	MDX	L	READ KEAD,1	INCREASE RD ADDR	30F09570
	4C860911		BSC	ī	INTRO	INCREASE NO ADDR	30F09580
0,33 01	40000711	*	550	•	111110		30FU9590
			****	** **	****	******	30F09600
		*			INTRPT 4	SERVICE ROUTINE	30F09610
•		****	****	***	*****	*******	30F09620
	100	*					30F09630
0937 0	0000	INTR4	DC		*-*		30F09640
09 38 0	0801		XIC		SNRS4-1	SENSE DSW	30F09650
0939 U	1000		NOF		0	USE FOR TRAP	30F09660
		*					30F09670
	D40008A8		STC	L		SAVE DSW BITS	30F09680
	6700U8E4		LDX		RTRN	CET FOR RETURN	30F09690
	6F0005£6		STX		MLSCF+1	SET FOR RETURN	30F09700 30F09710
0940 01	40800937		9 SC	I	INTR4		30F09720
		****	****	***	*****	******	30F09730
		*			CHECK REA		30F09740
		****	****	***		*****	30F09750
		*					30F09760
0942 0	UU00	READY	DC		*-*		30F09 77 0
0943 0	0802		XIO		SENSE	SENSE DSW	30F09780
0944 01	D40008A2		STO	L	D SW	STORE DSW	30F09790
	40980942		B SC	I	READY ++-	NO BITS FOUND	30F09800
0948 0	1801		SRA		1	REMOVE NRDY	30F09810
0949 01	442008U7		BSI	L	ERR1,Z	BR IF CTHER THAN NRCY	30F09820
		*					30F09830 30F09840
094B 0	1011	BOX	SLA		17 BCNT	RESET BOX CNT	30F09850
094C 0	D011	* "	210		DUNI	RESET BUX CIVI	30F09860
0940 01	65000953	BOX1	LDX	1.3	BDX2	LD REENTRY ADDRS	30F09870
	6D0005E6	DOAL	STX		MLSCF+1	SET MLSCF	30F09880
	4CUOC8DA		BSC	L		GO TO MENITOR	30F09890
		*					30F09900
0953 0	0882	BOX 2	XIC		SENSE	SENSE DSW	30F09910
0954 01	40980942		BSC	ı	READY ++-	RETURN IF READY	30F09920
	7403C95E		MDX	L	BCNT, 3		30F09930
0958 0	70F4	_	MDX		BOX1		30F09940
0050 0	4.05	# .		٠,	c	MESSAGE NUMBER	30F09950 30F09960
C959 0	6105 670009DF	NRDY	LDX		5 ANRDY	NOT REACY	30F09970
095C 0	400A		BSI		TYPE	PRINT MESSAGE	30F09980
0950 0	70ED		MDX		BOX	111111111111111111111111111111111111111	30F09990
		*					30F10000
095E 0	0000	BCNT	DC		*-*		30F10010
		*					30F10020
		****	***	***		******	30F10030
		*			FEED LAST		30F10040
			****	***	*****	********	30F10050
		*				5550 5544440	30F10060
	00000784	LSICD	XIU	L,	FUACU-1	FEED CCMMAND	30F10070
0961 0				13	6 ALCD	MESSAGE NUMBER LAST CARD	30F10080 30F10090
	670009FF	1.	LDX BSI		TYPE		30F10100
0964 0	440U05F8	Δ.	BSI		CNTRL	GO TO NEXT ROUTINE	30F10110
090) 01	44000010	🕳 e iji sa sa		es En	£ 367 (8 5 53 6)		30F10120
						******	30F10130
						TUS MESSAGE OF ASTROMATION	30F10140
			****	***	*****	*******	30F10150
0 3 M E	5555	★ ******	. **		1 + 4	한지 발표하다 그 학교 신화생 (1987)	30F10160
C967 0	0000	TYPE	DC		*-*	인 시청 	30F10170
0968 0	ACCORDING	idistic.			SMSG	NEW MSG NUMBER	30F10180
0969 0			STX	3	ALPHA	UPDATE MESSAGE	30F10190
	6 A LOOG 43	₽ SYS\$		•		CALL ON LOC	30F10200 3 30F10210
	44800163 0970		BSI DC	I	LDG SMSG	ADDR OF MSG	30F10220
70C I	0710		<i>U</i> C		3/13 0	100h 01 1100	30. 20220
#275 K	PERINGPORT	· checui	Ģ.a. j.	1-7.			
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		_				20510220
	1.2	*				30F10230
096D U	D006		STC	AL PHA+1		30F10240
096E 01	40800967		BSC I	TYPE	RETURN	30F10250
		*				30F10260
C970 0	0000	SMSG	DC ·	* -*	MESSAGE NUMBER	30F10270
0971 0	0000		DC	/0000	HEX/DECIMAL SW	30F10280
0972 0	0001		DC	/0001	DATA WORD ID	30F10290
		ALPHA		*-*	ALPHA ADDRS 1	30F10300
0973 0	0000	ALFINA		*-*	ALPHA ADDRS 2	30F10310
C974 0	0000		oc oc		ALPHA ALUKS 2	
0975 0	1442		DC	/1442		30F10320
		*				30F10330
		***	*****	****	*****	30F10340
		*		ALPHA MESS	SAGES	30F10350
		****	*****	*****	******	30F10360
		*	-			30F10370
0074 0	1525	ACNBK	D.C.	/1E3E	CARD NOT BLANK	30F10380
0976 0	1E3E	ACINDA			CARD HOT BEARK	30F10390
0977 0	6232		DC	/6232		
C978 U	2176		DC	/2176		30F10400
0979 0	529E		DC	/529E		30F10410
097A 0	211A		DC	/211A	•	30F10420
097B 0	5E3E		DC	/5E3E	•	30F10430
097C 0	765A		DC	/765A		30F10440
0976 0	FFFF		DC	/FFFF	$(x_1, x_2, \dots, x_n) = (x_1, \dots, x_n) = (x_1, \dots, x_n) = (x_1, \dots, x_n)$	30F10450
0710	* * * *	*		*****		30F10460
0076 0	0035	AWAS	DC	/923E	WAS S/B	30F10470
097E 0	923E	ANAS			MA3 3/ 0	
097F 0	9A21		DC	/9A21		30F10480
0980 0	219A		DC	/219A		30F10490
0981 0	BCIA		DC	/BC1A		30F10500
0982 U	FFFF		DC	/FFFF		30F10510
		*				30F10520
0983 0	923E	ADWAS	DC	/923E	WAS S/B	30F10530
0984 0	9A21		DC	/9A21		30F10540
0985 0	2121		DC	/2121		30F10550
			DC	/9ABC		30F10560
0986 0	9ABC					30F10570
0987 0	1A21		DC	/1A21		
0988 0	2121		DC	/2121		30F10580
0989 0	FFFF		DC	/FFFF		30F10590
		*		* *		30F10600
098A U	2184	A SD SW	DC	/2184	-STATIC DSW EFR	30F10610
0988 0	9A9E		DC	/9A9E		30F10620
0980 0	3E9E		DC	/3E9E		30F10630
098D 0	221E		DC	/221E	· ·	30F10640
098E 0	2132		DC	/2132		30F1U650
			DC	/9A92		30F1C660
098F 0	9492					30F10670
0990 0	2136		DC ·	/2136		
0991 0	6262		DC	/6262	7 a	30F10680
0992 0	FFFF		DC	/FFFF		30F10690
		*				30F10700
0993 0	2184	ABDSW	DC	/2184	-BUSY DSW ERR	30F10 7 10
0994 0	1482		DC	/1AB2		30F10720
0995 0	9446		DC	/9AA6		30F10730
0996 0	2132		DC	/2132		30F10740
			DC	/9A92		30F10750
0997 0	9A92					
0998 0			DC ·	/2136		30F10760
0999 0	6262		DC	16262		30F10770
C99A 0	FFFF		DC	/FFFF		30F10780
		*	1			30F10790
099B U	2184	ADSW4	DC	/2184	-LEV4 DSW ERR	30F10800
0990 0	5E36		DC	/5E36	नेविति निविद्या विकेश करण व्यापाः	30F10810
0990	B6F0		DC	/B6F0	Markey Argon Mar 30s	30F10820
099E 0	2132		DC	/2132	PRODUCE BUILDING	30F10830
		÷-	DC	/9A92		30F10840
099F 0	9A92			the state of the Allinean	14 M () () () () () () () () () (and the state of t
09A0 0	2136		DC	/2136		30F10850
09A1 0	6262		DC	/6262	1.15mm 直路接上的 (外冠蛇	30F10860
09A2 0	FFFF		DC .	/FFFF	2、10、10、10、10、10、10、10、10、10、10、10、10、10、	30F10870
		**				30F10880
09A3 0	329A	ANINT	DC	/329A	DSW	30F10890
09A4 0	9221		DC	/9221		30F10900
22			_	· -		
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13M MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYS	PART NO. 2191224 PAGE 9	IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PAGE
1442 READER/PUNCH FUNCTION TEST		- 1442 READER/PUNCH FUNCTION TEST - TO THE T	
Property of the second of the	the Jake		30511500
1009A5 0 2176	30F10920 30F10930 30F10940 30F10950 30F10960	C9DF U 7662 ANRDY DC /7662 NRDY - PRESS 1442 START O9E0 O 32A6 DC /32A6 O9E1 O 2184 DC /2184 O9E2 U 5662 DC /5662 O9E3 O 369A DC /369A O9E4 O 9A21 DC /9A21	30F11590 30F11600 30F11610 30F11620 30F11630 30F11640 30F11650
** O9AB U 21B4 ALV4 DC /21B4 -LEV4 O9AC O 5E36 DC /5E36 O9AC O B6FU DC /B6FO O9AE U FFFF DC /FFFF	30F10970 30F10980 30F10990 30F11000 30F11010	09E5 0 FCFU - DC /FCFO 09E6 0 FUD8 DC /FOD8 09E7 0 219A DC /219A 09E8 0 9E3E DC /9E3E 09E9 C 629E DC /629E	30F11660 30F11670 30F11680 30F11690 30F11700
* 09AF 0 2184 ALVU DC /2184 -LEV0 09B0 0 5E36 DC /5E36 09B1 0 B6C4 DC /B6C4	30F11020 30F11030 30F11040 30F11050 30F11060	09EA 0 FFFF - DC /FFFF # 09EB 0 5E32 ALDBK DC /5E32 LCAD BLANKS 09EC U 21UU DC /2100	30F11710 30F11720 30F11730 30F11740
09B2 0 FFFF	30F11080 30F11080 30F11090 30F11100	C9EC U 1A5E DC /1A5E 09EE 0 3E76 DC /3E76 09EF U 5A9A DC /5A9A 09FU O FFFF DC /FFFF	30F11750 30F11760 30F11770 30F11780
0965 0 761E	30F11110 30F11120 30F11130 30F11140	* O9F1 U 5E32 ANYP DC /5E32 LD ANY PATTERN PLUS BLAN O9F2 O 213E DC /213E O9F3 O 76A6 DC /76A6 O9F4 O 2156 DC /2156	30F11790 NKS 30F11800 30F11810 30F11820 30F11830
0989 0 2184 AECK DC /2184 ERR CK 098A 0 3662 DC /3662 098B 0 6221 DC /6221 098C 0 1E5A DC /1E5A 098D 0 FFFF DC /FFFF	30F11150 30F11160 30F11170 30F11180 30F11190	09F4 0 2156 DC /2156 09F5 0 3E9E DC /3E9E • 09F6 0 9E36 DC /9E36 09F7 0 6276 DC /6276 09F8 0 2156 DC /2156	30F11840 30F11850 30F11860 30F11870 30F11880
09BE 0 2184 ACCNT DC /2184 COL CNT 09BF 0 1E52 DC /1E52 O9C0 0 5E21 DC /5E21 O9C1 G 1E76 DC /1E76	30F11200 ER 30F11210 30F11220 30F11230 30F11240 30F11250	09FA 0 9A21 DC /9A21 09FB 0 1A5E DC /1A5E 09FC 0 3E76 DC /3E76 09FC 0 5A9A DC /5A9A C9FE 0 FFFF DC /FFFF	30F11690 30F11900 30F11910 30F11920 30F11930
09C2 0 9E21 DC /9E21 09C3 0 3662 DC /3662 09C4 0 FFFF DC /FFFF * 09C5 0 2121 ADATA DC /2121 COL DA	30F11260 30F11270 30F11280 ATA ERR 30F11290	* OPFF O 5E3E ALCD DC /5E3E LAST CARD OAOO O 9A9E DC /5A9E OAO1 G 211E DC /211E OAO2 O 3E62 DC /3E62	30F11940 30F11950 30F119c0 30F11970 30F11980
09C6 0 1E52 DC /1E52 09C7 0 5E21 DC /5E21 09C8 0 2121 DC /2121 09C9 0 2184 DC /2184 09CA 0 323E DC /323E	30F11300 30F11310 30F11320 30F11330 30F11340	0A03 0 3200 DC /3200 0AU4 0 FFFF DC /FFFF * 0A05 0 2184 ADSWO DC /2164 —LEVO DSW ERR	30F11990 30F12000 30F12010 30F12020 30F12030
09CB 0 9E3E DC /9E3E 09CC 0 2136 DC /2136 09CD 0 6262 DC /6262 09CE 0 FFFF DC /FFFF	30F11350 30F11360 30F11370 30F11380 30F11390	0A06 0 5E36	30F12040 30F12050 30F12060 30F12070
09CF 0 095E ALDP DC /095E LAST DP- 09D0 0 3E9A DC /3E9A 09D1 0 9E21 DC /9E21 09D2 0 5256 DC /5256	30F11400 30F11410 30F11420 30F11430 30F11440	0A0B 0 6262 DC /6262 0A0C 0 FFFF DC /FFFF * 0A0D 0 5E32 ASTOH DC /5E32 LGAD FRCM STK 2 0A0E 0 2112 DC /2112	30F12080 30F12090 30F12100 30F12110 30F12120
09D3 0 8421 DC /8421 09D4 0 FFFF	30F11450 30F11460 30F11470 30F11480	OAUF 0 6252 DC /6252 OA10 U 7221 DC /7221 OA11 U 9A9E DC /9A9E OA12 O 5A21 DC /5A21	30F12130 30F12140 30F12150 30F12160
09D7 0 FFFF DC /FFFF C9D8 0 56B2 APCH DC /56B2 PUNCH 09D9 0 761E DC /761E	30F11490 30F11500 30F11510 30F11520	0A13 U D821 DC /D821 0A14 O FFFF DC /FFFF CA15 U 9A36 ASETP DC /9A36 SET PATT IN SW 0-11	30F12170 30F12180 30F12190 30F12200
09DA 0 2600 DC /2600 09DB 0 FFFF DC /FFFF * 09DC 0 1236 AFD DC /1236 FEED	30F11530 30F11540 30F11550 30F11560	OA16 O 9E21 DC /9E21 T CA17 O 563E DC /563E PA OA16 O 9E9E DC /9E9E TT OA19 O 2122 DC /2122 I OA1A O 7621 DC /7621 N	30F12210 30F12220 30F12230 30F12240 30F12250
69DD 0 3632 DC /3632 09DE 0 FFFF DC /FFFF	30F11570 30F11580	GAIB 0 9A92 DC /9A92 SW	30F12260

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PROG ID 030F-0 PAGE 9A

1442 READER/PUNCH FUNCTION TEST

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1442 READER/PUNCH FUNCTION TEST

OAIC O	2104	DC	/2104	0	30F12270
OAID O	84FC	DC	/84FC	-1	30F12280
OALE O	FC21	DC	/FC21	1	30F12290
OA1F O	9E26	DC	/9E26	THEN TN SW 12	30F12300
0A20 0	3676	DC	/3676	EN	30F12310
0A21 0	219E	DC	/219E	T	30F12320
0A22 0	7621	DC	/7621	N	30F12330
0A23 0	9492	DC	/9A92	SW	30F12340
CA24 U	21FC	DC	/21FC	ï	30F12350
0A25 0	D821	DC	/D821	2	30F12360
0A26 0	FFFF	DC	/FFFF	<u>-</u>	30F12370
Unit o		*			30F12380
0A27 0	5262	ALACD DC	/5262	OR GANG PUNCHED CARES	30F12390
0A28 0	2116	DC	/2116		30F12400
0A29 0	3E76	DC	/3E76		30F12410
OAZA O	1621	DC	/1621		30F12420
OAZB U	5682	DC	/56B2		30F12430
OAZC O	761E	DC	/761E		30F12440
OAZD O	2636	DC	/2636		30F12450
OAZE O	3221	DC	/3221		30F12460
OAZF O	1E3E	DC	/1E3E		30F12470
0A30 0	6232	DC	/6232		30F12480
CA31 0	9A00	DC	/9A00		30F12490
0A32 0	FFFF	DC	/FFFF	·	30F12500
0.32 0	• • • • • • • • • • • • • • • • • • • •	*			30F12510
		********	******	*******	30F12520
		*	PUNCH DAT	TA TABLE	30F12530
		*********		******	30F12540
		*			30F12550
0A33 0	8010	WAREA DC	/8010	COLUMN 1	30F12560
0A34 0	4020	DC	/4020		30F125 7O
0A35 0	2040	DC	/2040		30F12580
0A36 0	1080	DC	/1080		30F12590
0A37 0	0900	DC	/0900		30F12600
0A38 0	0600	DC	/0600		30F12610
0A39 0	0600	DC	/0600		30F12620
OA3A O	0900	DC	/0900	•	30F12630
UA3B O	1080	DC	/1080		30F12640
OA3C U	2040	DC	/2040		30F12650
OA3D O	4020	DC	/4020		30F12660
CASE O	8010	DC :	/8010		30F12670
OA3F O	FFF7	DC	/FFF7		30F12680
0A40 0	8880	DC	/8880		30F1·2690
0A41 0	CCCO	DC	/CCC0		30F12700
0A42 U	EEEO	DC :	/EEEO	•	30F12710
0A43 U	FFF0	DC	/FFF0		30F12720
0A44 U	7777	DC	/7777		30F12730
0A45 0	3333	DC	/3333		30F12740
0A46 0	1111	DC	/1111	•	30F1 <u>2</u> 750
0A47 0	FFF7	DC	/FFF7	COL 21	30F12760
CA48 0	A000	DC	/A000		30F12770
0A49 0	9000	DC	/9000	ALPHA RIPPLE	30F12780
UA4A O	8800	DC	/8800	•	30F12790
0A4B 0	8400	DC	/8400		30F12800
OA4C O	8200	A DC	/8200	COL 26	30F12810
CA4D O	8100	DC 1	/8100		30F12820
OA4E O	8080	DC	/8080		30F12830
OA4F O	8040	DC 🕬	/8040		30F12840
0A50 0	8020	HEADC 87	/8020	and the state of t	30F12850
0A51 0	8010	DC	/8010		30F12860
CA52 0	5000	DC 44	/5000 and		30F12870
0A53 0	4800	DC 🕖	/4800		30F12880
0A54 0	4400	DC 140	/4400		30F12890
0455 O	4200	DC 💯	/4200		30F12900
0 62AC	4100	DC 💥	/4100		30F12910
0A57 0	4080	DC 😘	/4080	Mill dwaller	30F12920
0A58 0	4040	DC	/4040		30F12930
0A59 0	4020	DC	/4020		30F12940
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DATE	02JAN66		NOV66		PROG ID 030F-0
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DASC 0 2800 DC 72800 30F12970 MASE 0 2400 DC 72400 30F12980 MASE 0 2200 DC 72400 30F12980 MASE 0 2100 DC 72600 30F12980 MASE 0 2100 DC 72100 30F13000 MASE 0 2100 DC 72080 30F13010 MASE 0 2040 DC 72080 30F13010 MASE 0 2040 DC 72080 30F13020 MASE 0 2020 DC 72020 30F13020 MASE 0 2020 DC 72020 30F13020 MASE 0 2020 DC 72020 30F13030 MASE 0 2010 DC 72010 30F13030 MASE 0 70F00 DC 76000 30F13040 MASE 0 70F00 DC 7600 30F13040 MASE 0 70F00 DC 70000 30F13040 MASE 0 70F00 DC 70000 30F13070 MASE 0 70F00 DC 70000 30F13100 MASE 0 70F00 DC 70000 CD 7000 30F13100 MASE 0 70F00 DC 70FF0 30F13200 MASE 0 70F00 DC 70FF0 30F13200 MASE 0 70F00 DC 70FF0 30F13300 MASE 0 70F13300 MASE 0 70F00 DC	0A5A 0	4010	DC	/4010	COL 40 WAREA+39	30F12950
0.000						
0.005 0 200 0						
0.005 0 2100 0 C 72100 30F13000 30F13010						
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DAMA 0 2040						
DAMAS D 2010 DC						
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DAGE 0 0000			DC	/2010		30F13040
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MACT O FCOO DC FFCOO 30F13090 30F13090 30E13090 30E13090 30E13090 30E13090 30E13090 30E13090 30E13090 30E13090 30E13100 30E13100 30E13100 30E13100 30E13100 30E13110 30EE1310 30EE1311 30EE3111	0A65 0	FC00				
03469 0 03F0	0A66 U	03F0				
0000 0C	0A67 0	FC00				
0004 0 8887		-				
DAGE 0 4444						
DAGE 0 2222						
0000 0 1111						
DAGE 0 0007						
026F 0 8880						
00A70 0 CCC4						
0A71 0 AAA2						30F13170
0013 0 4444	0A71 0		DC	/AAA2		30F13180
00474 0 6666	0A72 0	9991	DC	/9991		
00475 0 5555	0A73 0	4444	DC		•	
00476 0 2222						
30F13240 30A77 0 3333	0A75 0				•	
00478 0 1111						
DARTO 0 0005					•	
DA7A 0 0006					CHECK PCH TERM	
DARTO O FFFT DC /FFFT 30F13280 DATC O FFFT DC /FFFT 30F13300 DATC O FFFT DC /FFFT 30F13300 DATC O FFFT DC /FFFT 30F13300 DATC O FFFO DC /FFFO 30F13310 DATF O FFFO DC /FFFO 30F13310 DATF O FFFO DC /FFFO 30F13320 DATF O FFFO DC /FFFO 30F13330 DATF O FFFO DC /FFFO 30F13350 DATF O FFFO DC /FFFF TERMINATOR 30F13350 DATF O FFFO DC /FFFF TERMINATOR 30F13350 DATF O FFFF DC /FFFF TERMINATOR 30F13350 DATF O FFFF DC /FFFF TERMINATOR 30F13360 **********************************					CHECK TON TEMP	
DATC 0 FFF7 DC /FFF7 30F13300 DATC 0 FFF7 DC /FFF7 30F13300 DATE 0 FFF0 DC /FFF0 30F13310 DATE 0 FFF0 DC /FFF0 30F13320 DARE 0 FFF0 DC /FFF0 30F13320 DARE 0 FFF0 DC /FFF0 30F13320 DARE 0 FFF0 DC /FFF0 30F13330 DARE 0 FFF0 DC /FFF0 30F13340 DARE 0 FFF0 DC /FFFF TERMINATOR 30F13350 **********************************					*	30F13280
DATE O FFFO DC /FFFO 30F13310 DATE O FFFO DC /FFFO 30F13320 DATE O FFFO DC /FFFO 30F13320 DATE O FFFO DC /FFFO 30F13330 DATE O FFFO DC /FFFO 30F13300 DATE O FFFO DC /FFFO MATERIAL STATEMENT	0A7C 0					30F13290
DATE O FFFO DC /FFFO 30F13320 DA80 O FFFO DC /FFFO 30F13340 DA81 O FFFO DC /FFFO 30F13340 DA82 O 0GOO DC /O000 COLUMN 80 30F13350 DA83 O FFFF DC DC /FFFF TERMINATOR 30F13370 **********************************	OATE O	FFF7	DC	/FFF7		30F13300
00880 0 FFF0	OATE O	FFF0	DC	/FFF0		
DA81 0 FFF0 DC /FFF0 DC /O000 COLUMN 80 30F13340 DA82 0 0000 DC /O000 COLUMN 80 30F13360 30F13370 30F1	0A7F 0	FFF0				
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# 30F13410 30F13420 00AD4 0051 RAREA BSS 80 00B26 05E8 END BGIN 30F13450 00B26 05E8 END RAREA BSS 81 00B26 05E8 EN						30F13390
DAB4			*******	***	**********	30F13400
DAD4 0051 RAREB BSS 81 30F13430 30F13440 30F13440 30F13440 30F13450 30F1345						
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9000 0 7600 4000 00 77607 8609 6605 4800 5750 1207 1600 1000 0000 0 8000 0 8000 0 1000 100			'. ¢'			
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TAME BOL REMARKS

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1442 READER/PUNCH FUNCTION TEST CORRESPONDENCE

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CROSS REFERENCE LISTING
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SYMBOL VALUE
                  REFERENCES
ABDSW
        0993
                   0873
        09BE
                   087F
ACCNT
        0.976
ACNRK
                   086E
ADATA
        0905
                  0881
ADSWC
        0A05
                   0877
ADSW4
        099B
                   0879
ADWAS
        0983
                  097E
AECK
        0939
                   0870
        0900
AFD
                   0760
ALACE
        UA27
                   06AC
AL C'D
        U9FF
                   0962
                   0626,0659,06B0,06EB
ALDBK
        09EB
ALOP
        OSCF
                   0899
        0973
                   06AE,0969,096D
ALPHA
                   0883
AL VU
        09AF
AL V4
        09AB
                  0875
AMSG
        08A0
                   0889
ANINT
        09A3
                   0874,0882
ANRITY
        OODE
                   0954
                   071F,0732
        09F1
ANYP
APCH
        0908
                  0798
APCK
        09B3
                   0878
AR D
        69D5
                   0776
ASDSW
        098A
                   0871
                   06F2
ASETP
        0415
ASTOH
        OAOD
                   U63D, 066E, 0699
                   U870, 0872, 0876, 0878, 087A, 087C, C880
AWAS
        097E
BCNT
        095E
                   0940,0956
                   08B5,08C6,08C7,08E5,08E6
BDSW
                   0000.05E8
        0160
BEGIN
        05F8
                   0825
BGIN
                   062A, 065D, 0727, 0759, 0805
        0744
BLANK
BLK1
        0753
                  0758
BOX
                   095D
BOX1
        094D
                   0958
        0953
                  094D
BOX2
                   0914
CKRDR
        0932
CLEAR
        0688
                   068B
CNTRL
        05F8
                   05F7,073B,08E0,0965
        05FC
CN10
CN20
        0603
                   05FE
CN30
        0609
                   07AE,07C6,07D5,07DC
COL
        OSAE
                   0751,0765,0770,078E,0793,07C8,07DE,08B7,08CC,08CF,
COLCT
        USAC
                   08F2,08F5,08F8,08F9,0918
                   U64F, 0679, C6A6, 06D9, 07E5
COMPR
                   07CE, 07EF
COM1
        07AE
        0706
                  0701
CDM2
COM 3
        07CF
                   07E 0
COM4
        07E2
                   07CA
COM5
        07E7
DADRS
        0784
                   0623,063A,C656,066B,068E,0696,06D0,06E8,071C,073E,
                   0740,0747,C796,07A8
                   0784,0703,0852,0853
DATA
        AARO
                   0689,06C3,06DD
DFACT
        06E3
                  U6C4+06CB
DLYCT
        UoE4
        08A2
                   083F + 0944
DSW
                   0810,0836,0880,0913,0916
        7A80
DS N SB
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0828,082C,082D,08CB,08ED,08FC,093A

1500066

U858, 08E9, 0914, 0915

0000,088D,0891

OIMAY66

415490B

0000,0000,0000,0000,0607

081F

07F3

0755

DSKO

DSW4

END

EBITS

ERLCK

FRROR

ERRO

CATE

EC NO.

0846

08A8

090F

0164

0166

0162

O7FE

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415490

PROG ID 030F-0

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

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1442 READER/PUNCH FUNCTION TEST

```
ERR1
        0807
                   0813,0949
        0811
FRRIA
                   A080
                  086C,08D0,08F6
ERR10
        0867
                   081A, 08C8, 08E7
ERR 2
        0815
ERR4
        081C
                   0825,08EB
                   0834,08F0
ERR5
        0827
                   0844,0848
FRR 5R
        0834
ERR5S
                   0808,0812,0828
        6885
ERR6
        0836
                   082F
                   0837,083D
ERR7
        0845
                   084F,08FA
ERR8
        0849
ERR9
        0851
                   0788,0709,0865
ERR9A
        0860
                   0854
                   0803,0810,0819,0824,0833,0843,0847,084E,0860,086B,
ETYPE
        0886
                   0896,08D5
        0891
                   U88C
ETYP2
        0896
                   088F
FDACD
        0785
                   0767,095F
                   0635,076A
FEED
        075B
FLIP
        067F
                   0685
                   06A4,0773,07CF
FLIPS
        078C
                   0000,05EF
ILO
        017A
        018A
                   0000
IL 1
        0194
                   0000
IL2
IL3
        OIAA
                   0000
                   0000,05F5
IL4
        018A
INCR
        07BA
                   U7A7, 07EC
INTRO
                   05ED, C92A, 0930, 0935
        0911
INTR4
        0937
                   05F3,0940
KEFFE
        0900
                   08EF
KEFFF
        090E
                   0.8FA
K0008
        0908
                   0921
K080G
        090C
                   0631,0664,06DB,072E,07F6,07FC
LOCK
        07F (
                   0000,096A
LOG
        0163
LOGBY
        0167
LOOP
        0894
                   0612,062C,065F,06BD,0729,074E,075E,07F8,07FA
LRTN
        0620
                   0616
LSTCC
        095F
                   05F1,07AB,07E3,0858,085B
        0884
                   060E,06C7,06FE,08BC,08BF,08D8,093E,094F
MLSCF
        Ú5E5
MSGO
        086E
                  0800
MSG1
        0870
                   0800
MSG10
                   086A
        0882
MSG2
        0872
                   0818
MSG3
        0874
                   08D4
MSG4
        0876
                   0823
MSG5
        0878
                   0832
MSG6
        087A
                   0842
MSG7
        087C
MSG8
        087E
                   084D
MSG9
        0880
                  085F
                   0795,07A4,07CC,07EE,091E
NCDI
        0784
NRDY
        0959
NRTN
        061D
OP
                  U762,0778,C79A
        089A
DPMSW
                   0801,080E,088A,0895,08B9
        0890
PBUE
        090A
                   0902,0922
PCHST
        0789
                   0797, 07A9, 07B0, 07BA, 07BE, 07C5, 07E9, 091C, 0924, 0926,
PDATA
        0786
                  092E
PID
                  062F,0662,0691,0710,072C,07A1
PNCHR
        .078D
        0790
PNCH1
                   0923
PUNCH
        0902
RAD
        05DE
                  060D
RAREA
        0A84
                   0544, U648, 0672, 067F, 0681, 0688, 068C, 069D, 06D2, 06E6,
                   0707, 0714, 071A, 0723, 0786, 07D7, 07E7, 0904
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0621,0638,0654,0669,0694,0736,0745,07C3,092C

1442 READER/PUNCH FUNCTION TEST

RAREE OAD4 0664,06CE,074B,0753 RDRST 077C 0787 0760,0839,0838,0932,0933 REAC 0904 064A,0674-069F,06B6,06D4,0725,0738,0750,077F READR 076C REACY 0942. 06EF, 075C - 0774, 0790, 0946, 0954 RID U50**0** 05EC, C5EC - 0602, 0603, 0605, 0609, 08DE RIDCK 0616 05FD RLCF 0168 ROTAT 0633,0651,0666,067B,06A8,0743,0748 073D ROKB 01BC 0000 ROTY 0138 0000 RTNOM 0617 0606 RTNSh 060F 0165 RTRN 093C 08E4 RTRN1 USFC 0 8F 3 RTTBL 0618 0608,0616,0617 RT1 0621 0618 RT11 0624 0637 RT2 0638 0619 RT21 0641 0653 RT22 0644 0647 **RT23** 0648 064C RT3 061A 0654 RT31 065D 0568 RT4 0669 061B RT41 0672 0676, 0693 RT42 067D RT5 0694 0610 RT51 06A1.06AA 069D RT6 061D 06AB RT61 0688 06E2 RT62 06BF 06E1 RT63 06C5 0600 RT64 06C 5 06CB RT65 06CE 0606 RT7 06E6 061E RT7Sh 0.719 06F8,0702,C705,0713,0782 R171 06F6 U6FC, 0716 RT 72 O6FA **U702** RT 73 RT 74 070A 0707 070B 0718 RT8 071A 061F RT81 0727 0730 RT9 0731 0620 RX1 0861 0854 SENSE 0884, 08CA, 0943, 0953 0906 SMSG 0968, 096C 097u SNRSO 0909 0912 SNRS4 090B 0938 SNSWS 0782 06F6,0712 STACK 0792,0863 0788 0000,0614,08C1,08DC,08E2 0161 STRT 05EB 05E3,05E4 SVKB 0180 SHO 05DF 05F9,0601,0739,08DA Sm1 05E0 068F,070B SW2 05E1 Sw3 05E2 TABLE 089D 0887,0688,0893 0642,0742,0700,0928 TERM. 0788 0628, U63F, 0658, 0670, 0698, 0682, 06ED, 06F4, 0721, 0734, TYPE 0967 095C, 0964, 096E 06E5 068C,06DF **T6CNT** 0768,077D,079F,08D6,0900 HAIT USAF WAITI 088A 08C 5 WAIT2 U83F MAIT3 0803 **A860** 0509,0700,08BE,0951 WAIT4 AC80

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1442 READER/PUNCH FUNCTION TEST

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM
1442 TIMING TEST

PART NO. 2191230 PAGE 0001

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PARAGRAPH PROGRAM PREREQUISITES MODEL NUMBER AND CORE STORAGE SPEED 2.2 PROGRAM LOADING PROGRAM OPERATION 3.2.1 PROGRAM CONTROL - FUNCTION O 3.2.2 ROUTINE SELECTION - FUNCTION 1 3.2.3 OPTIONAL CONTROL PROGRAM HALTS 3.3 3.3.1 NORMAL HALTS 3.3.2 ERROR HALTS PROGRAM TERMINATION 3.5 RESTART STATUS MESSAGES ERROR MESSAGES 4.2 or and the property of the pro 5.1 TEST PROCEDURE 5.1.1 TEST ORGANIZATION 5.1.2 ERROR CHECKING ROUTINE DESCRIPTION 5.2.1 TEST SEQUENCE CONTROL ROUTINE - CHTRL 5.2.2 NORMAL TEST ROUTINE 5.2.3 OPTIONAL TEST ROUTINE 5.2.4 TEST SUBROUTINES 5.2.5 ERROR CONTROL ROUTINE 5.2.6 INTERRUPT ROUTINES u portiren i filozofia alektrolegi erektyi (helektrolegi). Nagaraki (alektrolegi) erektrolegi (helektrolegi) erektrolegi (helektrolegi). Nagaraki (helektrolegi) erektrolegi (helektrolegi).

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DATE 02JAN66 01MAY66 15NOV66 15JUN67 EC NO. 415490 415490B 419643 420317

NOTE - DO NOT RUN THIS PROGRAM IN OVERLAP.

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM
1442 TIMING TEST

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PART ND. 2191230 PAGE CUO1A

1. PURPOSE

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THE 1442 TIMING TEST IS DESIGNED TO CHECK THE FOLLOWING CONDITIONS.

A. READ AND PUNCH COLUMN TIMING TOLERANCES.

B. PUNCH COLUMN DELAY TOLERANCE.

C. PROPER DSW RESPONSES.

D. READ REGISTRATION OR COMPARE ERRORS.

E. PUNCH ECHO CHECK ERRORS.

F. CORRECT COLUMN INTERRUPT COUNTS.

THE PROGRAM WILL NOT CHECK THE FOLLOWING ITEMS WHICH MUST BE CHECKED BY SCOPING WHILE PROGRAM IS RUNNING.

A. READ CELL DURATION

B. EMITTER TIMING

C. READ OR PUNCH SINGLE SHOT TIMING (LOGIC PAGE XR301)

2. PREREQUISTIES

2.1*** PROGRAM PREREQUISITES

1130 DIAGNOSTIC MONITOR II
THIS TEST MAY NOT BE RUN IN OVERLAP WITH ANY OTHER PROGRAM.

2.2*** EQUIPMENT PREREQUISITES

1. 1131 CPU WITH PROGRAM LOAD FROM CARD OR PAPER TAPE READER.

2. 1442 MOD 5, 6, OR 7.

2.3*** MODEL NUMBER

THE 1442 MODEL NUMBER MUST BE KNOWN IN ORDER TO USE THIS PROGRAM.
THIS DATA MAY BE ENTERED VIA THE BIT SWITCHES AS OUTLINED IN SECTION
3.1 OR THIS DATA MAY BE ENTERED VIA A PATCH CARD AS FOLLOWS.

COL 1 - 10 +05E1 000M COL 11 - 19 BLANK COL 20 - 35 1442 MOD M

WHERE M = MOD NUMBER 5, 6, OR 7

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3.2.2 ROUTINE SELECTION - FUNCTION 1

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THE SELECTED ROUTINE WILL LOOP UNTIL A NEW ROUTINE IS SELECTED OR ROUTINE SELECTION IS RESET.

- 1. TO SET ROUTINE SELECTION
 - A. SET SWITCHES 0-7 TO 41.
 B. SET ROUTINE NUMBER IN SWITCHES 12-15.

RTN DESCRIPTION

1 * DELAY PUNCH + CHECK COL . MORMAL ROUTINES-INTR TIME

READ + CHECK COL INTRPT TIME. THE PROGRAM STARTS WITH
PUNCH COL INTRPT TIME GRAPH . ROUTINE 1, RUNS EACH

* READ COL INTRP' TIME GRAPH • ROUTINE IN SEQUENCE
• THEN TERMINATES AFTER
• ROUTINE 4•

* MODIFY DATA • OPTIONAL ROUTINES—
• THESE ROUTINES RUN

• ONLY IF SELECTED.

* = REFER TO SECTION 3.2.3 FOR SPECIAL INSTRUCTIONS.

- C. PRESS INT REQ KEY ON CONSOLE.
- 2. TO RESET ROUTINE SELECTION, SET AS IF SELECTING ROUTINE ZERO.
- 3.2.3 OPTIONAL CONTROL
 - 1. SPECIFY PUNCH DELAY

THE PUNCH DELAY IN ROUTINE ONE CAN BE CONTROLLED BY A SWITCH ENTRY WITH THE SWITCHES SET TO BIXX WHERE XX IS THE PUNCH DELAY INCREMENT IN MEX.

2. GRAPH SCALE FACTOR

IF NO GRAPH IS PUNCHED BY ROUTINE 3 OR 4 IT IS PROBABLE THAT THE READER OR PUNCH TIMING IS SO FAR OFF THAT THE GRAPH DOES NOT PUNCH ON THE CARD. THE GRAPH SCALE IS NORMALLY 38 USEC PER CARD ROW. THIS SCALE FACTOR CAN BE INCREASED BY A SWITCH ENTRY WITH THE SWITCHES SET TO CLOX WHERE THE NEW SCALE IS EQUAL TO 38X USEC.

3. MODIFY PUNCH DATA

ROUTINE 9 WILL READ IN ONE CARD AND REPLACE THE PUNCH DATA TABLE WITH THE DATA PATTERN PUNCHED IN THAT CARD. THE PROGRAM WILL THEN RESTART FROM ROUTINE 1.

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1776	MING IESI			· · · · · · · · · · · · · · · · · · ·	1776 (1)1100 (20)	
3.3	*** PROGRAM	MAI TC		: J	3.5*** RESTART	
	-1 NORMAL H			- -	1. SET SWITCHES 0-7 TO 01.	
	.HALT NO.	DESCRIPTION •	RESTART •	2 0	 2. TURN ON SWITCH 8. 3. SET DESIRED CONTROL IN SWITCHES 9-14. 4. PRESS INTERRUPT REQUEST KEY. 	
	.(B REG).		ACTION .	1 5	本文章在中华市市	
	. 3001	PROGRAM STOP OR ADDRESS STOP . HALT ON ERROR	PRESS START DISPLAY MODE-PRESS START.	3 0		
	. 3002	•	RUN MODE - PRESS START .	3 5		
3.7	~ ENDOD HA	** !TS		3 . 3		
300	.2 ERROR HA	LTS				
	.HALT NO.	DESCRIPTION	RESTART .	3 (5		
	. 30F1	CHECK SUM ERROR ON FIRST	RELOAD •))		
	. 30F2	READER DSW ERROR WHEN	RELOAD	ר ן ר		
	• . •	LOADING LOADER .	•	3 3		
	. 30F3	CARD 2 OF LOADER DID NOT .	RELOAD •	, , ,		
	30F4	CAN NOT CLEAR CORE - DUE TO . ERROR IN ADDRESSING UPPER .	•))		
		CORE	NPRO THEN PLACE CARDS .	ם ר		
	• • •	MONITOR OR TEST PROGRAM .	RUN OUT IN FRONT OF . REMAINING DECK AND PRESS.	3 3		
	. 30F6 .	MONITOR DID NOT LOAD .	START	3 3		
	30F7	CHECK SUM WHEN LOADING .	RELOAD	- 3		
	• • • • • • • • • • • • • • • • • • •	MONITOR • READER NOT READY •	MAKE READER READY .	J.		
	. 30F9 .	INVALID INTERRUPT WHICH WILL .	•	3 3		
	. 30FA .	NOT RESET CONSOLE PRINTER HANG UP -	FIX THE CONSOLE PRINTER .	3 3		
	• 30FR •		OR NOP THIS WAIT	3 3		
3.4	SOCOLDAN	*****				
5.4	*** PROGRAM 1	TERMINATION PROGRAM HAS NOT BEEN SPECIFIED TH	E PROGRAM WILL TERMINATE	3 -		
		ND OF ROUTINE 4. ROUTINE 5 WILL		3 7		
	IF ANY RETENDED	OUTINE IS SELECTED THAT ROUTINE W	ILL LOOP AND WILL NOT	2 7		
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PART NO. 2191230 IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM 1442 TIMING TEST A2F04 OOOR AAAA LOAD PCHED CARDS LOAD THE CARDS PUNCHED BY ROUTINE 1 INTO 1442 HOPPER. THIS DECK WAS PUNCHED WITH A ROTATING PATTERN. IT MUST BE LOADED IN THE SAME ORDER AS PUNCHED. THERE MUST BE NO CARDS MISSING FROM THE A2F04 OOOR AAAA LAST CARD THE LAST CARD INDICATOR WAS ON AT THE COMPLETION OF THE LAST 1442 CONTROL OPERATION. A FEED COMMAND WAS GIVEN TO RUN OUT THE LAST CARD. THE ROUTINE WILL THEN TERMINATE. IF NO ROUTINE HAS BEEN SELECTED, THE PROGRAM WILL ADVANCE TO THE NEXT ROUTINE. IF A ROUTINE HAS BEEN SELECTED, THE PROGRAM WILL RESTART THAT ROUTINE. A2F05 OOOR AAAA NRDY - PRESS 1442 START THIS MESSAGE WILL BE PRINTED IF THE 1442 IS NOT READY FOR ANY REASON. THE PROGRAM WILL LOOP WAITING FOR READY. TO CONTINUE, CLEAR ANY ERROR CONDITIONS AND MAKE THE 1442 READY. PUNCH DELAY - X A2F06 0001 AAAA XXXXX ROUTINE 1 VARIES THE TIME BETWEEN RECEIVING THE PUNCH RESPONSE AND ISSUEING THE PUNCH DATA COMMAND. THE DELAY STARTS AT MAXIMUM AND IS REDUCED IN STEPS TO MINIMUM. THIS MESSAGE IDENTIFIES THE DELAY FOR THE NEXT 80 CARDS. X = THE DELAY INCREMENT AND XXXX EQUALS THE DELAY IN USEC. AZFO7 OOOR AAAA AVG COL INTRPT TIME XXXXX YYYYY THIS MESSAGE IS PRINTED IN ROUTINES 1 AND 2 AFTER 80 CARDS HAVE BEEN READ OR PUNCHED, OR WHEN THE ROUTINE TERMINATES. XXXXX = AVERAGE TIME IN USEC BETWEEN COLUMN INTERRUPTS FOR ALL CARDS READ OR PUNCHED SINCE THIS AVERAGE MESSACE WAS LAST PRINTED. YYYYY = NORMAL AVERAGE TIME IN USEC. *****

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PART NO. 2191230 IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM 7 PAGE 0005 1442 TIMING TEST 7 4.2*** ERRUR MESSAGES THE DSW IS CHECKED FOR ABSOLUTE CORRECTNESS AT ALL TIMES. IF AN 7 ERROR IS DETECTED ONE OF THE MESSAGES BELOW WILL INDICATE THE PROBLEM. IT IS LEFT TO THE OPERATOR TO ANALYZE THE DSW FOR THE SPECIFIC PROBLEM AREA. ************ THE 1442 DSW 7 **PUNCH RESPONSE** READ RESPONSE ERROR CHECK 3 LAST CARD OPERATION COMPLETE NOT USED) NOT USED FEED CHECK AT READ STATION NOT USED 7 NOT USED NOT USED NOT USED NOT USED 12 13 NOT USED 14 BUSY NOT READY OR BUSY ______ E0001 SWS INVLD THE SETTING OF SWITCHES 4-7 DID NOT EQUAL THE LOAD SEQUENCE NUMBER OF ANY PROGRAM IN CORE. 3 E0003 OVR CORE THE PROGRAM WHICH THE LOADER WAS ATTEMPTING TO LOAD EXCEEDED AVAILABLE CORE. LOADING WAS TERMINATED. CKSUM E0004 A CHECK SUM ERROR WAS DETECTED WHILE LOADING A TEST PROGRAM. THIS ERROR OCCURS UNDER ANY OF THE FOLLOWING CONDITIONS. 1. A CARD IS MISSING OR IS OUT OF SEQUENCE. 2. THERE IS AN EXTRA CARD IN THE DECK. THE PUNCHED INFORMATION ON THE CARD IS NOT CORRECT. DATA WAS LOST OR PICKED UP DUE TO A MACHINE MALFUNCTION. DUE TO A CPU MALFUNCTION, THE CHECK SUM WAS NOT CORRECTLY CALCULATED. WHEN THIS ERROR OCCURS ATTEMPT TO RELOAD THE PROGRAM. 3 OOON XXXX E0005 THIS ERROR WILL OCCUR IS AN INTERRUPT OCCURS, BUT THE ILSW WAS NOT CORRECT. N IS THE INTERRUPT LEVEL AND XXXX IS THE ILSW. THIS PRINTOUT WILL ONLY OCCUR IF THE INTERRUPT IS RESET BY A BOSI. NO ATTEMPT IS MADE BY THE ERROR ROUTINE TO RESET THE REQUEST BIT. PROG ID 032F-# 15N0V66 15JUN67 02JAN66 OlMAY66 EC NO. 415490 415490B 419643 420317 PAGE 0005

PART NO. 2191230 IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM 0005A PAGE 1442 TIMING TEST CARD NOT BLANK E2F00 OOOR AAAA A PRE-PUNCHED CARD WAS DETECTED BY A PUNCH ROUTINE. THIS CARD WAS NOT PUNCHED BUT WAS REJECTED. THIS CARD WILL BE FED OUT INTO WAS S/B - STATIC DSW ERR E2F01 OOOR AAAA XXXX 0000 A BIT, IN ADDITION TO NOT READY, WAS ON IN THE DSW WHEN IT WAS SENSED BEFORE GIVING A CONTROL COMMAND TO THE 1442. USE THE ABOVE DSW TABLE TO IDENTIFY THE BIT. THEN TAKE APPROPRIATE CORRECTIVE LAST DP - CCCC WAS S/B - BUSY DSW ERR E2F01 000R AAAA XXXX 0003 THIS DSW WAS SENSED IMMEDIATELY AFTER THE 1442 CONTROL COMMAND WAS IDENTIFIED BY CCCC GIVEN. THAT COMMAND SHOULD MAKE THE 1442 BUSY AND NOT READY. NO OTHER BITS SHOULD BE ON. LAST DP - CCCC E2F03 OOOR AAAA - NO INTRPT - LEV4 NO OP COMPLETE INTERRUPT WAS RECEIVED FOLLOWING THE LAST CONTROL COMMAND, IDENTIFIED BY CCCC. THE COMMAND WAS RECEIVED BY THE 1442 IF AN EOFO2 MESSAGE WAS NOT PRINTED. LAST OP - CCCC WAS S/B - LEVO DSW ERR E2F04 OOOR AAAA XXXX X003 THIS DSW WAS SENSED IN THE LEVEL ZERO INTERRUPT ROUTINE. THE RESPONSE FOR THE LAST CONTROL COMMAND (IDENTIFIED BY CCCC) SHOULD BE ON, TOGETHER WITH BUSY AND NOT READY. LAST OP - CCCC WAS S/B - LEV4 DSW ERR E2F05 OOOR AAAA XXXX X80X THIS DSW WAS SENSED IN THE LEVEL 4 INTERRUPT ROUTINE. OP COMPLETE BIT SHOULD BE ON. THE LAST CARD AND NOT READY BITS MAY BE ON. ALL OTHER BITS SHOULD BE OFF. LAST OP - PUNCH EOFO6 OOOR AAAA WAS S/B - PCH CK XXXX 0000 A PUNCH ECHO CHECK OCCURRED WHILE PUNCHING THE LAST CARD. XXXX IS THE PUNCH ECHO THAT WAS READ FROM THE 1442 BUFFER REGISTER FOLLOWING THE PUNCH CHECK. ANY BIT ON IN THIS WORD IDENTIFIES A DESCREPANCY BETWEEN THE PUNCH DIE ECHO AND THE DATA WHICH WAS TO BE PUNCHED IN THE COLUMN. PUNCHING IS TERMINATED WHEN THIS ERROR IS DETECTED, THUS, THE ERROR OCCURRED IN THE LAST COLUMN PUNCHED. IF PUNCHING A ROTATE PATTERN DISCARD THE CARDS PUNCHED AND RESTART THE ROUTINE. THIS ERROR WILL OCCUR IN ROUTINE 1 IF THE PUNCH DELAY EXCEEDS THE DURATION OF THE PUNCH RESPONSE TRIGGER. THIS TRIGGER SHOULD STAY UN FOR AT LEAST 300 USEC. DATE 02JAN66 01MAY66 15N0V66 15JUN67 PROG ID 032F-* EC NO. 415490 PAGE 0005A 419643

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1442 TIMING TEST

E2F07 OOOR AAAA

LAST OP - CCCC WAS S/B - ER CK XXXX 0000

AN ERROR CHECK OCCURRED DURING THE LAST OPERATION. IF THE LAST OPERATION WAS READ OR PUNCHED, THIS MESSAGE SHOULD BE FOLLOWED BY AN EOFOB MESSAGE WHICH WILL IDENTIFY THE NUMBER OF COLUMNS PROCESSED BEFORE THE ERROR WAS DETECTED. TO CONTINUE, CLEAR ALL CARDS FROM THE 1442, THEN PRESS START. IF PUNCHING A ROTATING PATTERN TO BE READ BY THE NEXT ROUTINE, DISCARD THE CARDS PUNCHED AND RESTART THE ROUTINE.

E2F08 OOOR AAAA

WAS S/B - COL CNT ER XXXXX YYYYY

XXXXX IDENTIFIES THE NUMBER OF COLUMN INTERRUPTS THAT OCCURRED DURING THE LAST OPERATION. YYYYY IDENTIFIES THE EXPECTED NUMBER OF INTERRUPTS. IF AN ERROR CHECK OCCURRED DURING THE LAST OPERATION (IDENTIFIED BY AN EOFO6 OR EOFO7 MESSAGE), THE OPERATION WILL TERMINATE AT THE TIME THE ERROR OCCURRS. THUS, THIS ERROR MESSAGE WILL IDENTIFY THE COLUMN BEING PROCESSED WHEN THE ERROR WAS DETECTED.

E2F09 OOOR AAAA

WAS S/B COL - DATA ERR XXXX YYYY 000ZZ

THE DATA XXXX READS FROM COLUMN ZZ(IN DECIMAL) DOES NOT AGREE WITH THE EXPECTED DATA YYYY FOR THAT COLUMN. CHECK CARD FOR CORRECT DATA. IF DATA IS CORRECT. THEN A READ ERROR OCCURRED. IF THE DATA IS NOT CORRECT. A PUNCH ERROR OCCURRED. IN THE LATTER CASE, IF NO PUNCH CHECK WAS DETECTED WHILE PUNCHING THE CARD. THE PUNCH ECHO CHECK IS NOT FUNCTIONING.

E2F10 OOOR AAAA

LAST OP - CCCC WAS MAX COL - INTRPT SLOW XXXXX YYYYY ZZZZZ

XXXXX EQUALS THE COLUMN INTERRUPT TIME FOR THE COLUMN IDENTIFIED BY ZZZZZ. THE EXPECTED MAXIMUM TIME FOR THIS OPERATION ON THIS MODEL 1442 IS GIVEN BY YYYYY.

CHECK THE ADJUSTMENT AND LUBRICATION OF THE FEED AND READ CLUTCH. ALSO CHECK THE PUNCH INCREMENTAL DRIVE.

E2F11 OOOR AAAA

LAST DP - CCCC WAS MAX COL - INTRPT FAST XXXXX YYYYY ZZZZZ

XXXXX EQUALS THE COLUMN INTERRUPT TIME FOR THE COLUMN IDENTIFIED BY ZZZZZ. THE EXPECTED MAXIMUM TIME FOR THIS OPERATION ON THIS MODEL 1442 IS GIVEN BY YYYYY.

CHECK THE ADJUSTMENT AND LUBRICATION OF THE FEED AND READ CLUTCH. ALSO CHECK THE PUNCH INCREMENTAL DRIVE.

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1442 TIMING TEST

5. COMMENTS 5.1*** TEST PROCEDURE 5.1.1 TEST ORGANIZATION THE TEST ROUTINES FOLLOW THE SAME BASIC ORGANIZATION AS THE 1442 FUNCTION TEST. THE TIMING CAPABILITY IS PART OF THE INTERRUPT ROUTINE. AFTER THE COMPLETION OF EACH OPERATION, THE TIMING RESULTS ARE AVAILABLE TO THE TEST ROUTINE FOR ANALYSIS. , 5.1.2 ERROR CHECKING SAME ERROR CHECKING AS THE 1442 FUNCTION TEST WITH THE EXCEPTION THAT THE LEVEL O DSW IS NOT CHECK. IN ADDITION, THE TIMING TEST ATTEMPTS TO FORCE PUNCH DELAY ERRORS (THESE ARE DETECTED AS PUNCH CHECKS), AND IT CALCULATES THE READ AND PUNCH RESPONSE TIMES COMPARING THEM TO MIMIMUM AND MAXIMUM VALUES FOR THE APPROPRIATE 1442 MODEL. 5.2*** ROUTINE DESCRIPTION THIS SECTION CONTAINS A DESCRIPTION OF THE PROGRAM ROUTINES AND SUBROUTINES IN APPROXIMATELY THE ORDER IN WHICH THEY APPEAR IN THE PROGRAM AS FOLLOWS -1. TEST SEQUENCE CONTROL ROUTINE 2. NORMAL TEST ROUTINES 3. OPTIONAL TEST ROUTINES 4. TEST SUBROUTINES 5. ERROR CONTROL ROUTINES 6. INTERRUPT ROUTINE 5.2.1 TEST SEQUENCE CONTROL ROUTINE - CNTRL THIS ROUTINE CHECKS THE ROUTINE SELECTION SWITCH (SW1 IN THE PROGRAM CONTROL TABLE) AND DETERMINES WHICH TEST ROUTINE IS TO BE RUN NEXT. IF A TEST ROUTINE HAS BEEN SELECTED, IT ESTABLISHES A TRANSFER TO THAT ROUTINE. IF NO ROUTINE IS SELECTED, A TRANSFER IS ESTABLISHED TO THE NEXT TEST ROUTINE IN SEQUENCE. THE ROUTINE ADDRESS TABLE (RTTBL) WHICH IS PART OF CNTRL CONTAINS THE ROUTINE ADDRESS FOR ALL TEST ROUTINES IN THE SEQUENCE IN WHICH THEY ARE TO BE RUN. THE LAST TEST ROUTINE IN THE NORMAL SEQUENCE IS IDENTIFIED BY THE TABLE ARTH. AFTER THIS ROUTINE IS RUN, CHTRL WILL TRANSFER TO MONITOR END AND TERMINATE THE PROGRAM. ROUTINES FOLLOWING THE TABLE NRIN ARE CALLED OPTIONAL TEST ROUTINES AND WILL ONLY BE RUN IF SELECTED. 5.2.2 NORMAL TEST ROUTINES IF NO TEST ROUTINE IS SELECTED, THESE FOUR ROUTINES WILL RUN IN SEQUENCE THEN THE PROGRAM WILL TERMINATE. 15NBV66 032F-* DATE 02JAN66 01MAY66 15JUN67 PROG ID 415490 415490B 420317 0006A EC NO. 419643 PAGE

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1. TEST ROUTINE 1 - DELAY PUNCH

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THIS ROUTINE PUNCHES CARDS USING DATA PREVIOUSLY SET IN THE DATA TABLE. THE DATA IS ROTATED BY ONE COLUMN FOR EACH CARD PUNCHED. EACH CARD IS READ AND CHECKED FOR BLANK BEFORE IT IS PUNCHED. THE ROUTINE PUNCHES THE FIRST BO CARDS WITH A MAXIMUM PUNCH DELAY OF 330 USEC (PUNCH DELAY IS THE

TIME BETWEEN THE PUNCH RESPONSE INTERRUPT AND THE PUNCH DATA COMMAND). THE DELAY IS DECREASED BY 38 USEC. FOR EACH SUCCEEDING BO CARDS. WHEN MINIMUM DELAY IS REACHED, THE PUNCH DELAY IS RESET TO 330 USEC, AND THE CYCLE REPEATED UNTIL ALL CARDS IN THE HOPPER HAVE BEEN PUNCHED.

IS REACHED. THE PUNCH DELAY IS RESET TO 330 USEC. AND THE CYCLE REPEATED UNTIL ALL CARDS IN THE HOPPER HAVE BEEN PUNCHED.

AT THE START OF THE ROUTINE AND AT EACH CHANGE IN PUNCH DELAY.

A MESSAGE IS PRINTED (A2F06) STATING THE PUNCH DELAY AND A PUNCH DELAY INCREMENT. THE DELAY IS RESET WHEN THIS INCREMENT GOES TO JEPO.

THE TIME BETWEEN COLUMN INTERRUPTS IS DETERMINED BY THE INTERRUPT ROUTINE. IF THIS TIME FALLS OUTSIDE THE FOLLOWING LIMITS, AN ERROR MESSAGE (E2F10 OR E2F11) IS PRINTED.

MODEL	MIN USEC	MAX USEC	AVG
. 6 ,	10600	14300	1220
5 OR 7	5300	7180	600

AFTER PUNCHING 80 CARDS OR AT THE COMPLETION OF THE ROUTINE. AN AVERAGE COLUMN TIME MESSAGE IS PRINTED SPECIFYING THE AVERAGE TIME SINCE THE LAST AVERAGE MESSAGE WAS PRINTED.

2. TEST ROUTINE 2 - READ

THIS ROUTINE READS THE CARDS THAT WERE PUNCHED BY ROUTINE ONE. THE DATA READ IS COMPARED TO THE DATA PUNCHED. IF THESE ARE NOT EQUAL, AN ERROR MESSAGE (E2F09) IS PRINTED.

THE TIME BETWEEN COLUMN INTERRUPTS IS DETERMINED BY THE INTERRUPT ROUTINE. IF THIS TIME FALLS OUTSIDE THE FOLLOWING LIMITS.

AN ERROR MESSAGE (E2F10 OR E2F11) IS PRINTED.

MODEL	MINUSEC	MAX USEC	AVG
6	900	1600	1300
5 OR 7	700	1300	1000

AFTER READING 80 CARDS OR AT THE COMPLETION OF THE ROUTINE, AN AVERAGE COLUMN TIME MESSAGE IS PRINTED SPECIFYING THE AVERAGE TIME SINCE THE LAST AVERAGE MESSAGE WAS PRINTED.

3. TEST ROUTINE 3 - PUNCH TIME GRAPH

THIS TEST WILL STORE THE TIME BETWEEN PUNCH COLUMN INTERRUPTS WHILE PUNCHING A CARD. ON THE NEXT CARD, IT WILL PUNCH A GRAPH WHICH DISPLAYS THE VARIATIONS IN COLUMN INTERRUPT TIME FROM COLUMN TO COLUMN. THIS PROCESS WILL BE REPEATED UNTIL THE LAST CARD INDICATOR IS SENSED.

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4. TEST ROUTINE 4 - READ TIME GRAPH -

THIS TEST WILL READ A BLANK CARD, STORE THE TIME BETWEEN READ COLUMN INTERRUPTS, THEN PUNCH A GRAPH DISPLAYING THE VARIATION IN COLUMN INTERRUPT TIME FROM COLUMN TO COLUMN. THIS PROCESS WILL BE REPEATED UNTIL THE LAST CARD INDICATOR IS SENSED.

5.2.3 OPTIONAL TEST ROUTINE

1. TEST ROUTINE 5 - MODIFY DATA

THIS ROUTINE WILL READ ONE DATA CARD AND REPLACE THE PUNCH DATA TABLE WITH THE DATA CONTAINED ON THAT CARD. THE ROUTINE WILL THEN RESTART THE PROGRAM FROM ROUTINE ONE.

5.2.4 TEST SUBROUTINES

1. PUNCH.

THIS SUBROUTINE PUNCHES ONE CARD THEN CHECKS FOR PUNCH ERRORS.

2. READ

THIS SUBROUTINE READS ONE CARD THEN CHECKS FOR READ ERRORS.

3. COMPARE COLUMN TIME

THIS SUBROUTINE CHECKS THAT COLUMN TIME FALLS WITHIN MINIMUM AND MAXIMUM LIMITS. IT ALSO ADDS ALL COLUMN TIMES AND KEEPS COUNT OF THE TOTAL NUMBER OF COLUMNS FOR CALCULATION OF THE COLUMN TIME AVERAGE.

4. PRINT COLUMN INTERRUPT AVERAGE TIME

THIS SUBROUTINE CALCULATES THE COLUMN INTERRUPT TIME AVERAGE AND PRINTS THE AVERAGE MESSAGE.

5. CHECK FOR BLANKS

THIS SUBROUTINE CHECKS EACH CARD BEFORE IT IS PUNCHED TO VERIFY THAT IT IS BLANK.

6. GRAPH SETUP

THIS SUBROUTINE WILL CALCULATE A GRAPH POINT FOR EACH COLUMN TIME. THIS SET OF GRAPH POINTS WILL BE PUNCHED ON THE NEXT CARD. THE SCALE CAN BE CHANGED WITH A FUNCTION 3 BIT SWITCH ENTRY.

7. READY

THIS SUBROUTINE IS ENTERED BEFORE ANY 1442 CONTROL COMMAND IS GIVEN. IT READS THE 1442 DSW AND CHECKS IT FOR READY (ALL BITS OFF). ANY BIT ON OTHER THAN NOT READY (BIT 15) WILL BE IDENTIFIED BY AN E2FOI MESSAGE. IF ANY BIT IS ON, A NRDY MESSAGE (A2FO5) WILL BE PRINTED. THIS ROUTINE STAYS IN A LOOP, PRINTING THE NRDY MESSAGE EACH 10 SECONDS UNTIL ALL BITS IN THE DSW GO OFF.

8. LAST CARD

THIS SUBROUTINE IS ENTERED AFTER AN OPERATION IS COMPLETED IF THE LAST CARD INDICATOR WAS TURNED ON DURING THAT OPERATION. THE SUBROUTINE WILL FEED OUT THE LAST CARD, PRINT A MESSAGE INDICATING THAT THE LAST CARD INDICATOR WAS DETECTED, THEN GO TO CNTRL TO TERMINATE THE ROUTINE AND ADVANCE TO THE NEXT ROUTINE.

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-5.2.5 ERROR CONTROL ROUTINES

1442 TIMING TEST

1. INTERRUPT WAIT ROUTINE

ALL SUBROUTINES COME HERE AFTER THE START OF AN I/O OPERATION FROM WHICH AN INTERRUPT IS EXPECTED. THIS ROUTINE RESETS ALL ERROR CONTROL WORDS, SENSES AND STORES THE BUSY DSW, THEN WAITS IN A TIMED LOOP (AT LEAST 20 SECONDS) FOR THE OP COMPLETE

IF NO OP COMPLETE INTERRUPT IS RECEIVED THE FOLLOWING ERROR MESSAGES ARE PRINTED.

- A. E2FO2 IS BUSY DSW ERROR
- B. E2F03 NO OP COMPLETE INTERRUPT

IF OP COMPLETE INTERRUPT IS RECEIVED THIS ROUTINE WILL CHECK FOR PROPER PERFORMANCES OF THE OPERATION. THE FOLLOWING CHECKS ARE MADE AND ERROR MESSAGES PRINTED IF APPROPRIATE.

- A. E2FO2 IF BUSY DSW ERROR
- B. E2F05 IF OP COMPLETE DSW ERROR
- C. EZFOB IF INCORRECT NUMBER OF COLUMN INTERRUPTS

THE ROUTINE WILL THEN CHECK FOR LAST CARD IF THE LAST CARD INDICATOR IS ON THIS ROUTINE WILL TRANSFER TO THE LAST CARD ROUTINE. IF NO LAST CARD THE ROUTINE WILL RETURN TO THE 1/0 SUBROUTINE FROM WHICH IT WAS ENTERED.

2. PRINT ERROR MESSAGES

THIS ROUTINE PRINTS ALL THE ERROR MESSAGES. IF THE MESSAGE IS THE FIRST ERROR MESSAGE FOLLOWING AN I/O CONTROL COMMAND A LAST OP MESSAGE WILL PRECEED THE ERROR MESSAGE. THIS LAST OP MESSAGE WILL IDENTIFY THE LAST 1/O CONTROL OPERATION EXECUTED. THE ERROR MESSAGE FOLLOWING REFERS TO ERRORS DETECTED IN THAT OPERATION.

5.2.6 INTERRUPT ROUTINES

THE COLUMN INTERRUPT TIMING IS DONE IN THIS ROUTINE. THE PROGRAM TRANSFERS HERE ON THE FIRST COLUMN INTERRUPT. ALL FOLLOWING READ OR PUNCH RESPONSES ARE SENSED IN THIS INTERRUPT ROUTINE. THE ROUTINE DOES NOT BRANCH OUT OF INTERRUPT UNTIL AN OP COMPLETE RESPONSE IS SENSED.

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BREEFER COLUMN 1 1221 1 ESSESSES 1 111

1ST CARD PUNCHED IN ROUTINE 1 AND USED IN ROUTINE 2.

111111111 11 1 1 111 1 1 1111 1

2ND CARD PUNCHED IN ROUTINE 1 AND USED IN ROUTINE 2.

11111111 1 111111 11111111111 11 1.

3RD CARD PUNCHED IN ROUTINE 1 AND USED IN ROUTINE 2.

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PART NO. 2191230 PAGE 1442 TIMING TEST GRAPH OF PUNCH TIME BETWEEN COLUMN INTERRUPT 4ErtESteterreBrettete Bresteterreterreterreterreterreter Bresteterreterreterret Brestet GRAPH OF READ TIME BETWEEN COLUMN INTERRUPTS D2JAN66 GIMAYEE 15::0V66 15 JUN 67 PROG ID 032F-× EC NO. 415490 4154005 PAGE

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1442 TIMING TEST

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		* (H)	ANGES IU	NOT SUN L	OSTIC MONITOR. PREVIOUS ITH DIAGNOSTIC MONITOR II.	32F00030
	•	* 15.	313 WILL	HUI KUR M	IIII DIAGNOSTIC NONTION III	32F00080
		* TH	IS TEST	WILL NET R	UN WITH PREVIOUS MONITORS.	32F00090
• •		*				32F00100
•		* TES	STS PRIO	R TO EC 41	9643 CATED NOV 15, 1966	32F00110
	**************************************				PERLY WITH DIAGNOSTIC	32F00120
		* MCI	NITOR II	•		32F00130 32F00140
		*		*****	*******	
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	•	*				32F00190
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		****	*****	******	*****	32F00230
		*		EQUATE TA		32F00240
		****	*****	*****	*******	32F00250
	•	* .	THIS TA	BLE EQUATE	S TEST PROGRAM LABELS	32F00260
	, and the second	#	_		NT DIAGNOSTIC MONITOR	32F00270 32F00280
		*	ADDRESS			32F00290
		*				32F00300
		*	MONITOR	ENTRY ADD	RESSES	32F00310
		*				32F00320
0160		BEGIN	EQU	/160 · · ·	BEGIN ROUTINE SUPERVISOR ROUTINE	32F00330
0161		START	EQU	BEGIN+1	SUPERVISOR ROUTINE	32F00340 32F00350
0162		ERROR	EQU	214K1+I	ERROR LOG ROUTINE STATUS LOG ROUTINE	32F00360
0163		LOG ENC	EQU	LOC+1	END ROUTINE	32F00370
0164		*	-40	200-1		32F00380
		*				32F00390
	. 14	*			URD ADDRESSES	32F00400
		*				32F00410
0165		RTNS	EQU	END+1	ROUTINE START SW LOCK ON ERROR CONTROL	32F00420 32F00430
0166		LOGBY		END+3	I/O BUSY SW ADDRS	32F00440
0167	*	±	E 90	ENDYS	170 0037 3# 450.5	32F00450
		· +				32F00460
		*	INTERRU	PT TRANSFE	R VECTOR ADDRESSES	32F00470
						32F00480
017A			EQU	/17A	INTERRUPT LEVEL ZERO	32F00490 32F00500
018A		ILI IL2	EQU	11 1+16	INTERRUPT LEVEL CNE INTERRUPT LEVEL TWO	32F00500 32F00510
019A 01AA				IL 2+16	INTERRUPT LEVEL THREE	32F00520
OIBA	ing the state of t	IL4	EQU	IL3+16	INTERRUPT LEVEL FOUR	
0188		ROTY	EQU	1L4+1	CONSOLE PRINTER REQUEST	32F00540
01 BC	10.000	RQKB		ROTY+1	USE KEYBOARD REQUEST	32FC0550
01 BD		SVKB	EQU	ROKB+1	KB SERVICE REQUEST	32F00560
		*	*****	***	******	32F00570 32F00580
6000		******		*+/05CC		32F00590
0000	17、11、14、15、14、14、14、14、14、14、14、14、14、14、14、14、14、	*				32F00600
	•	*	THE MON	ITOR USES	CORE LOCATIONS 0-05DC.	32F00610
		*			HESE ADDRESSES REFER	32F00620
21 2	1 11 11 11 11	*	TO THE	DIAGNOSTIC	MCNITOR LISTING.	32F00630
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05DC 0	.032F	PID	DC .	/032F	PROGRAM ID	32F00700
-475	02144	01 M 4 V	44 1 EM	0y66		PROG 1D
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05DD 0	0000	RID	DC		/0000	ROUTINE ID	32F00 7 10
05DE 0	0000	RAD	DC		/0000	ROUTINE ADDRS	32F00720
05DF 0	0000	SWO	DC		/0000	PROGRAM CONTROL	32F00730
		Swl	DC		/0000		32F00740
05E0 0	0000					ROUTHE SEEECH TON	32F00750
05E1 0	0000	SW2	DC		/0000		
05£2 0	0000	SW3	DC		/0 000		32F00760
05E3 1	05EB		DC		STRT		32F09 77 0
05E4 1	O SEB		DC		STRT	RESTART ADDRESS	32F00780
05E5 0	0000	MLSCF	DC		*-*	SET BY WAIT RTN AND MON	32F00790
05£6 0	0000		DC		*-*	SET BY CNTRL AND INRTPT	32F00800
			DC		/FFFF	TERMINATOR	32F00810
05E7 0	FFFF	_	DC .		/FFFF	TENNITATION	32F00820
		*					
		***	****	***	******	******	32F00830
•		*			TEST INIT	IALIZATION	32F00840
		***	****	***	******	********	32F00850
		*					32F00860
0559 00	44800160	BGIN	128	1	BEGIN	•	32F00870
	05DC	001.4	DC	•	PID	PCT ADDRESS	32F00880
05EA 1	UDUC		20		F10	FCT ADDRESS	32F.00890
•		*					
		*					32F00900
		* ST	ART D	FT	EST AND SI	NGLE PASS INITIALIZATION	32F00910
2.6		*					32F00920
		*			and the second		32F00930
05EB 0	6100	STRT	IDX	1	0	SET TO START WITH	32F00940
05EC 0	69F0	JINI	STX	_	RID	FIRST ROUTINE	32F00950
							32F00960
	L 6D000683		STX		PONLY	RESET PUNCH TNLY SW	
	6500096E				INTR		32F00970
05F1 00	6D0U017A		STX	Ll	ILO	STO INTERRUPT TRANSFER	32F00980
05F3 01	65000993	¢	LDX	11	INTR2	VECTOR ADDRESSES	32F00990
05F5 00	6D000168		STX	· £1	IL4-2		32F01000
	C4000682		LD	L		CK FOR MOD NUM ENTRY	32F01010
	44200654		BSI	ī		BR IF MCD NUM ENTERED	32F01020
U3F9 U1	1 44200834		9.21	L	CHIRL 12	DK IF FICH HOM CHICKED	32F01030
		₹.					
05FB 0			LD		SW2	CHECK FCR MOD NUMBER	32F01040
05FC 01	4C20060B		BSC	L	SP•Z	BR IF MCD NUMBER ENTERED	32F01050
05FE 0	6101		LDX	1	1		32F01069
05FF 01	L 66000AA9		LDX	L2	AMOD		32F01070
	440J09F2		BSI	L		PRINT - ENTER MOD NUMBER	32F01080
0001 01		*		_			32F01090
0403.0	C 000	CTOTA			Cub		32F01100
0603 0		STRT1			SH2	LOCA WITTE NUMBER SATERER	
	1 4C2005EB		BSC	L		LOGP UNTIL NUMBER ENTERED	32F01110
0606 01	65000603		LDX		STRT1		32F01120
0608 0	6 9 D C		STX	1	MLSCF	RETURN TO THE MONITOR	32F01130
0609 00	44800161		BSI	I	START	TO ALLOW MSG TO PRINT	32F01140
		*					32F01150
0608-01	L D4000682	SP	STO	1	MCDNM	STO MOD NUM	32F01160
060D 0	6100	•	LDX		0		32F01170
	69D2		STX		Sw2	CLEAR SH2	32F01180
C60E 0				•		CEENK SHE	32F01190
060F 0			XID		TYP		
0610 0	0841	SPI	XIO	_	SENTY	•	32F01200
0611 0	7101		MDX	1	1		32FC1210
0612 0	1004		SLA		4		32F01220
0613 01	40280610		BSC	L	SP1,+Z		32F01230
	7500F900	经投资 。	MDX		-/700		32F01240
	7001		MDX		*+1	and the state of t	32F01250
	7017				MOD		32F01260
0618 0	1011	with a	MDX	-	118	All the control of th	
0619 0			LDX		110		32F01270
	6F000973	2.19.11			SPD1+1	SET NEW BASE TIME	32F01280
	67000090	5, 418.5	LDX	L3	144		32F01290
061E 01	6F00097D		STX	L3	SPD2+1		32F01300
0620 0	6309		LDX	3	9	SET FOR 9 PUNCH	32F01310
	6F0006E4		STX		PDMAX	DELAY INCREMENTS	32F01320
	67007117		LDX		/7117	SET INCR TIME TO 23 USEC	32F01330
					DLPCH	ACTION AND THE TO ESTABLE	32F01340
	6F0U09A8						
	6F0009B5				SPD3		32F01350
	6317				23		32F01360
	6F0006E5				DINCR		32F01370
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1442 TIMING TEST

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			. *				4.0. THE HOD ALMOST	32F01400
0630		C051	MOD	LD			LD THE MOD NUMBER	32F01410 32F01420
0631 0632		100C 180C		SLA SRA		·12 - 92 (104)::		32F01420
0633		9051		S	100	FIVE	e Mary de Laver y Carlotte de les rolls de la company	32F01440
	_	40200638		BSC	L			32F01450
0636		684C		STX	_		IF MOD SET CITEL TO	32F01460
0637		401C		BSI		CNTRL	RUN PUNCH RTN ONLY	32F01470
			*					32F01480
0638	01	94000684	MDD 6	S .	L		CHECK FCR MOD6	32F01490
		40200649		BSC		MOD7,Z		32F01500
063C		C83F	os et es	F)D			IF MOD6 SET FOR	32F01510
		DC000912		STD	L		MOD6 TIMING	32F01520 32F01530
063F		C83E DC000914		LDD		R6TM RDMAX	FOR STANDARD STANDARD	32F01540
0642		C03D		LD		PEAVE	후 그는 첫 병에는 지원 기를 받는다.	32F01550
	-	D4000A02	. 71	STO		PAVG	면의 이 시작 사람이 사용하는 경험에 가능했다. 동경하는 사람 	32F01560
0645		CO3B		LD		REAVG		32F01570
		D4000A03		STO	L	RAVG	en de la companya de References	32F01580
0648		400B		B S1	,	CNTRL		32F01590
1 7								32F01600
0649	0	903A	MOD 7				CHECK FCR MOD7	32F01610
		44180654		BSI	L	CNTRL ++-	15 NOT HOOZ HOD NUMBER	32F01620
064C		1810		SRA		16	IF NOT MOD7 MOD NUMBER	32F01630
064D	-	D093		STO		SW2	ERROR. GO REQUEST	32F01640 32F01650
064E	U	709C		MEX		STRT	NEW HCC NORDER	32F01660
0650		0000	- 17 · · · · ·	BSS	Ε	0.		32F01670
	1	0652	TYP	DC	Ξ.	SENTY	•	32F01680
						/0900		32F01690
0650 0651	0	0900		DC:		70700		
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0651 0652	U	0500	* *****	DC DC		/0500 /0F01 ***********************************	NTRGL ROUTINE	32F01710 32F01720 32F01730 32F01740
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0651 0652	U	0500	* ***** * ***** * THI	DC DC *****	*** T I N	/0500 /0F01 *************** SEQUENCE CO *************** E CHECKS SWI	CNTRGL ROUTINE ************************************	32F01710 32F01720 32F01730 32F01740 32F01750 32F01760 32F01770
0651 0652	0	0500	* ***** * THI: * SEQ! *	DC DC ***** S RDU JENCE	*** T I N	/0500 /0F01 *************** SEQUENCE CO *************** E CHECKS SWI	CNTRGL ROUTINE ************************************	32F01710 32F01720 32F01730 32F01740 32F01750 32F01760 32F01770 32F01780 32F01790 32F01800
0651 0652 0653	0	0500 0F01	* ***** * ***** THI * SEQU	DC DC	*** T I N	/0500 /0F01 ************************************	CHTROL ROUTINE *************** ITCHES AND CONTROLS ROUTINES ARE RUN.	32F01710 32F01720 32F01730 32F01740 32F01750 32F01770 32F01770 32F01780 32F01790 32F01800 32F01810
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0651 0652 0653 0654 0655 0656	0 0 0	0500 0F01 0000 C08A 4C080662	* ***** * **** * THI * SEQI * CNTRL	DC DC LD BSC	*** TINI IN	/0500 /0F01 ************************************	COTTOL ROUTINE ************** ITCHES AND CONTROLS ROUTINES ARE RUN. BR IF NG RTN SELECTD	32F01710 32F01720 32F01730 32F01740 32F01750 32F01770 32F01780 32F01780 32F01800 32F01810 32F01820 32F01830
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0651 0652 0653 0654 0655 0656 0658 0658	0 0 0 0 01 01 01	0500 0F01 0000 C08A 4C080662 D40005DD 901A 4C080669	* ***** * **** * THI * SEQI * CNTRL	DC LD BSC STD S BSC	*** TINI IN	/0500 /0F01 ************************************	COTTOL ROUTINE ************** ITCHES AND CONTROLS ROUTINES ARE RUN. BR IF NG RTN SELECTD	32F01710 32F01720 32F01730 32F01740 32F01750 32F01760 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01840 32F01850 32F01850 32F01850 32F01860
0651 0652 0653 0654 0655 0656 0658 0658 065B	0 0 0 0 01 0 01 0	0500 0F01 0000 C08A 4C080662 D40005DD 901A 4C080669 1810	* ***** * **** * THI: * SEQ! ** CNTRL *	DC LD BSC STD SRA	T INI	/0500 /0F01 ************************************	BR IF NO RTN SELECTO SAVE NEW RTN NUMBER BR IF VALID RTN	32F01710 32F01720 32F01730 32F01740 32F01750 32F01760 32F01770 32F01780 32F01800 32F01800 32F01800 32F01820 32F01830 32F01840 32F01850
0651 0652 0653 0654 0655 0656 0658 0658 0658 0658	0 0 0 0 01 01 0 01 0	0500 0F01 0000 C08A 4C080662 D40005DD 901A 4C080669 1810 D40005E0	* ***** * **** * THI: * SEQ! ** CNTRL *	DC ***** SROU JENCE DC LD BSC STD S SRA STO	t L L	/0500 /0F01 ************************************	BR IF NG RTN SELECTD SAVE NEW RTN NUMBER	32F01710 32F01720 32F01730 32F01750 32F01760 32F01770 32F01780 32F0180 32F0180 32F01830 32F01830 32F01840 32F01850 32F01850 32F01850
0651 0652 0653 0654 0655 0656 0658 0658 0658 0658	0 0 0 0 01 01 0 01 0	0500 0F01 0000 C08A 4C080662 D40005DD 901A 4C080669 1810	* ***** * **** * THI: * SEQ! ** CNTRL *	DC ***** ***** S.ROU JENCE LD BSC STD SC SRA STO STO	* * * * * T I N I N L L L L L L L L L L L L L L L L	/0500 /0F01 ************************************	BR IF NG RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN GO TO RTN ONE	32F01710 32F01720 32F01730 32F01740 32F01750 32F01760 32F01770 32F01880 32F01810 32F01820 32F01830 32F01840 32F01850 32F01860 32F01860 32F01860 32F01860 32F01860 32F01880 32F01880 32F01880 32F01880 32F01890
0651 0652 0653 0654 0655 0656 0658 0658 0658 0658	0 0 0 0 01 01 0 01 01 01	0500 0F01 0000 C08A 4C080662 040005DD 901A 4C080669 1810 D40005E0 D40005DD	* ***** * *** * THI: * SEQ! * * CNTRL * CNTRL	DC ***** ***** S.ROU JENCE LD BSC STD SC SRA STO STO	* * * * * T I N I N L L L L L L L L L L L L L L L L	/0500 /0F01 ************************************	BR IF NG RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN GO	32F01710 32F01720 32F01730 32F01740 32F01750 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01840 32F01850 32F01860 32F01860 32F01860 32F01860 32F01880 32F01880
0651 0652 0653 0654 0655 0656 0658 0658 0650 0660	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0000 C08A 4C080662 D40005DD 901A 4C080669 1810 D40005E0	* ***** * **** * THI: * SEQ! ** CNTRL *	DC ***** ***** S.ROU JENCE LD BSC STD SC SRA STO STO	* * * * * T I N I N L L L L L L L L L L L L L L L L	/0500 /0F01 ************************************	BR IF NO RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF	32F01710 32F01720 32F01730 32F01750 32F01760 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01850 32F01850 32F01860 32F01870 32F01880 32F01880 32F01880 32F01890 32F01900 32F01910
0651 0652 0653 0654 0655 0656 0658 0658 0650 0658 0660	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0000 C08A 4C080662 040005DD 901A 4C080669 1810 D40005E0 D40005DD	* ***** * **** * THI * SEQI * CNTRL * CNTRL	DC ***** SROU JENCE DC LD BSC STD SSRA STO STO HDK LD S	TINI IN L L	/0500 /0F01 ************************************	CONTROL ROUTINE **************** ITCHES AND CONTROLS ROUTINES ARE RUN. BR IF NO RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF NCRMAL SECUENCE *1	32F01710 32F01720 32F01730 32F01750 32F01760 32F01770 32F01780 32F01880 32F01810 32F01820 32F01830 32F01840 32F01850 32F01860 32F01870 32F01870 32F01870 32F01890 32F01990 32F01900 32F01910 32F01920 32F01930
0651 0652 0653 0654 0655 0656 0658 0658 0658 0658 0650 0662 0664 0666	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0000 C08A 4C080662 D40005DD 901A 4C080669 1810 D40005E0 D40005DD 74C1C5DD C40005DD	* ***** * **** * THI * SEQI * CNTRL * CNTRL	DC ***** ***** S. ROU JENCE DC LD BSC STD SSC SRA STO STO STO HDK LD	TINI IN L L	/0500 /0F01 ************************************	BR IF NO RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF	32F01710 32F01720 32F01730 32F01750 32F01760 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01840 32F01850 32F01860 32F01860 32F01860 32F01860 32F01860 32F01870 32F01980 32F01990 32F01910 32F01920 32F01930 32F01940
0651 0652 0653 0654 0655 0656 0658 0658 0658 0660 0662 0664 0666	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0C00 C08A 4C080662 D40005DD 901A 4C080669 1810 D40005E0 D40005DD 74C1C5DD C40005DD 900F 44B00164	* ***** * *** * THI * SEQI * * CNTRL * CNT O	DC +**** S ROU JENCE DC LD BSC STD S S STD S S STD S S STD S S STD S S STD S S	*** TINI IN L L L L L L L	/0500 /0F01 ************************************	BR IF NO RTN SELECTO SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF NCRMAL SECUENCE END OF PROGRAM	32F01710 32F01720 32F01730 32F01740 32F01760 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01840 32F01850 32F01860 32F01860 32F01860 32F01860 32F01890 32F01900 32F01900 32F01900 32F01920 32F01930 32F01930 32F01940 32F01950
0651 0652 0653 0654 0655 0656 0658 0658 0650 0662 0664 0666 0667	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0000 C08A 4C080662 040005DD 901A 4C080669 1810 D40005ED D40005DD 74C1C5DD C40005DD 900F 44B00164	* ***** * **** * THI * SEQI * CNTRL * CNTRL * CN1 0	DC ***** ***** S.ROUJENCE LD BSC STO SSTO SSTO SSTO SSTO SSTO SSTO SST	*** TINI IN L L L L L L L L L L L L L L L L L	/0500 /0F01 ************************************	CHTRCL ROUTINE **************** TCHES AND CONTROLS ROUTINES ARE RUN. BR IF NG RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF NCRMAL SECUENCE *1 ENC OF PROGRAM XR1=NEW ROUTINE NUMBER	32F01710 32F01720 32F01730 32F01750 32F01760 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01850 32F01850 32F01860 32F01870 32F01870 32F01870 32F01890 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01950 32F01960
0651 0652 0653 0654 0655 0656 0658 0658 0650 0662 0664 0666 0667	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0000 C08A 4C080662 D40005DD 901A 4C080669 1810 D40005ED D40005DD 74C1C5DD C40005DD 900F 44B00164 658U05DD C5000676	* ***** * *** * THI * SEQI * * CNTRL * CNT O	DC ***** ***** S ROU JENCE DC LD BSC STD SSRA STO STO SRA STO STO LD	*** TIN IN L L L L L L L L L L L L L L L L L	/0500 /0F01 ************************************	CONTROL ROUTINE **************** ITCHES AND CONTROLS ROUTINES ARE RUN. BR IF NO RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF NCRMAL SECUENCE *1 END OF PROGRAM XRI=NEW ROUTINE NUMBER FETCH RETURN ADRS	32F01710 32F01720 32F01730 32F01750 32F01760 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01850 32F01850 32F01860 32F01870 32F01870 32F01870 32F01870 32F01990 32F0190 32F0190 32F01910 32F01920 32F01930 32F01950 32F01950 32F01950 32F01970
0651 0652 0653 0654 0655 0656 0658 0658 0658 0658 0658 0667 0662 0664 0666 0667	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0000 C08A 4C080662 040005DD 901A 4C080669 1810 040005ED 040005DD 740105DD 900F 44800164 658005DD C5000676 D40005DE	* ***** * **** * THI * SEQI * CNTRL * CNTRL * CN1 0	DC ***** ***** S ROU JENCE DC LD BSC STD STO STO HDK LD S BSI LD LD STO	*** TIN IN L L L L L L L L L L L L L L L L L	/0500 /0F01 ************************************	CONTROL ROUTINE ***************** ITCHES AND CONTROLS ROUTINES ARE RUN. BR IF NO RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF NCRMAL SECUENCE *1 END OF PROGRAM XR1=NEW ROUTINE NUMBER FETCH RETURN ADRS STORE NEW RTN ADDRS	32F01710 32F01720 32F01730 32F01750 32F01750 32F01760 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01840 32F01850 32F01860 32F01870 32F01870 32F01970 32F01900 32F01900 32F01910 32F01930 32F01940 32F01950 32F01950 32F01950 32F01960 32F01970 32F01970
0651 0652 0653 0654 0655 0656 0658 065D 0662 0664 0666 0667	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0000 C08A 4C080662 040005DD 901A 4C080669 1810 040005E0 D40005DD 74C1C5DD C40005DD 900F 44B00164 658005DD C5000676 D40005DE D40005E6	* ***** * **** * THI * SEQI * CNTRL * CNTRL * CN1 0	DC ***** S ROULD BSC STD BSC SRAUSTO STD	**** T IN L L L L L L L L L L L L L L L L L L L	/0500 /0F01 ************************************	CNTRCL ROUTINE ***************** TCHES AND CONTROLS ROUTINES ARE RUN. BR IF NG RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF NCRMAL SECUENCE *1 END OF PROGRAM XR1=NEW ROUTINE NUMBER FETCH RETURN ADRS STORE NEW RTN ADDRS SET MLSCF FOR RETURN	32F01710 32F01720 32F01730 32F01750 32F01760 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01850 32F01850 32F01860 32F01870 32F01870 32F01870 32F01870 32F01990 32F0190 32F0190 32F01910 32F01920 32F01930 32F01950 32F01950 32F01950 32F01970
0651 0652 0653 0654 0655 0656 0658 0658 0650 0662 0664 0666 0667 0669 0668 0666 0667	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0000 C08A 4C080662 040005DD 901A 4C080669 1810 040005E0 040005DD 740105DD 900F 44800164 658005DD C5000676 040005DE 040005DE 040005DE	* ***** * **** * THI * SEQI * CNTRL * CNTRL * CN1 0	DC +**** SROCE DC LD BSC STD SSTO HDK LD STO	**** T INI IN L L L L L L L L L L L L L L L L L L L	/0500 /0F01 ************************************	CONTROL ROUTINE ***************** ITCHES AND CONTROLS ROUTINES ARE RUN. BR IF NO RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF NCRMAL SECUENCE *1 END OF PROGRAM XR1=NEW ROUTINE NUMBER FETCH RETURN ADRS STORE NEW RTN ADDRS	32F01710 32F01720 32F01720 32F01770 32F01760 32F01770 32F01770 32F01800 32F01810 32F01820 32F01830 32F01840 32F01850 32F01860 32F01860 32F01860 32F01870 32F01870 32F01980 32F01990 32F01930 32F01940 32F01950 32F01960 32F01960 32F01970 32F01960 32F01970 32F01970
0651 0652 0653 0654 0655 0656 0658 0658 0650 0662 0664 0666 0667 0669 0668 0666 0667	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0000 C08A 4C080662 040005DD 901A 4C080669 1810 040005E0 D40005DD 74C1C5DD C40005DD 900F 44B00164 658005DD C5000676 D40005DE D40005E6	* ***** * **** * THI * SEQI * CNTRL * CNTRL * CN1 O	DC ***** ***** S ROU JENCE DC LD BSC STD STD STD STD STD STD STD STD STD ST	T IN L L L L L L L L L L L L L L L L L L	/0500 /0F01 ************************************	CNTROL ROUTINE ***************** ITCHES AND CONTROLS ROUTINES ARE RUN. BR IF NO RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF NCRMAL SECUENCE *1 END OF PROGRAM XR1=NEW ROUTINE NUMBER FETCH RETURN ADRS STORE NEW RTN ADDRS SET MLSCF FOR RETURN SET RTN START SW GO TO MCNITOR	32F01710 32F01720 32F01730 32F01740 32F01760 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01840 32F01850 32F01860 32F01860 32F01870 32F01870 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01940 32F01950 32F01960 32F01970 32F01980 32F01980 32F01980 32F01980 32F01980 32F01990 32F01990 32F01990
0651 0652 0653 0654 0655 0656 0658 0658 0650 0662 0664 0666 0667 0669 0667 0667	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0000 C08A 4C080662 040005DD 901A 4C080669 1810 040005E0 040005DD 740105DD 900F 44800164 658005DD C5000676 040005DE 040005DE 040005DE	* ***** * **** * THI * SEQI * CNTRL * CNTRL * CN1 O	DC ***** ***** S ROU JENCE DC LD BSC STD	**** T IN L L L L L L I I L L L L L I I L L L L	/0500 /0F01 ********** ********** ** CHECKS SWI WHICH TEST /0000 SW1 CN20,+ RID RIDCK CN30,+ 16 SW1 RIDCK RIDCK RIDCK RID	CNTRCL ROUTINE ****************** TCHES AND CONTROLS ROUTINES ARE RUN. BR IF NG RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF NCRMAL SECUENCE *1 END OF PROGRAM XR1=NEW ROUTINE NUMBER FETCH RETURN ADRS STORE NEW RTN ADDRS SET MLSCF FOR RETURN SET RTN START SW GO TO MCNITOR	32F01710 32F01720 32F01720 32F01730 32F01750 32F01760 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01840 32F01850 32F01850 32F01860 32F01870 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F02000
0651 0652 0653 0654 0655 0656 0658 065D 065E 0660 0666 0667 0667 0667 0673	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0C00 C08A 4C080662 D40005DD 901A 4C080669 1810 D40005DD 740105DD C40005DD 900F 44B00164 658U05DD C5000676 D40005DE D40005DE D40005DE D40005E6 D4000165 44800161	* ***** * **** * THI * SEQI * CNTRL * CNTRL * CN1 O * CN2 O * RIDCK RTNOM	DC ***** ***** S ROU JENCE DC LD BSC STD STD STD STD STD STD STD DC LDX LDX STD STD DC DC DC DC DC DC DC DC DC	T IN L L L L L L L L L L L L L L L L L L	/0500 /0F01 ************************************	CNTRCL ROUTINE ***************** ITCHES AND CONTROLS ROUTINES ARE RUN. BR IF NG RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF NCRMAL SECUENCE *1 END OF PROGRAM XR1=NEW ROUTINE NUMBER FETCH RETURN ADRS STORE NEW RTN ADDRS SET MLSCF FOR RETURN SET RTN START SW GO TO MCNITOR	32F01710 32F01720 32F01720 32F01750 32F01750 32F01760 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01840 32F01850 32F01860 32F01870 32F01890 32F01990 32F01990 32F01990 32F01990 32F01990 32F01990 32F01990 32F01990 32F01990 32F01990 32F01990 32F01990 32F01990 32F01990 32F02000 32F02000 32F02000
0651 0652 0653 0654 0655 0656 0658 0658 0650 0662 0664 0666 0667 0667 0673 0675	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0500 0F01 0C00 C08A 4C080662 040005DD 901A 4C080669 1810 D40005DD 740105DD C40005DD 900F 44B00164 658005DD C5000676 D40005DE D40005DE D40005DE D40005DE D40005DE 040005DE 040005DE	* ***** * **** * THI * SEQI * CNTRL * CNTRL * CN1 O	DC ***** SROU BSC STO SSTO STO STO STO STO STO STO STO ST	TIN IN L L L L L L L L L L L L L L L L L	/0500 /0F01 *********** SEQUENCE CO ********** E CHECKS SWI WHICH TEST /0000 SW1 CN20,+ RID RIDCK CN30,+ 16 SW1 RID RID,1 RID	CNTRCL ROUTINE ***************** ITCHES AND CONTROLS ROUTINES ARE RUN. BR IF NG RTN SELECTD SAVE NEW RTN NUMBER BR IF VALID RTN IF INVALID RTN GO TO RTN ONE ADV TO NEXT RTN CHECK FOR END OF NCRMAL SECUENCE *1 END OF PROGRAM XR1=NEW ROUTINE NUMBER FETCH RETURN ADRS STORE NEW RTN ADDRS SET MLSCF FOR RETURN SET RTN START SW GO TO MCNITOR	32F01710 32F01720 32F01720 32F01730 32F01750 32F01760 32F01770 32F01780 32F01800 32F01810 32F01820 32F01830 32F01840 32F01850 32F01850 32F01860 32F01870 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F01900 32F02000

DATE 02JAN66 01MAY66 15NDV66 EC ND. 415490 415490B 419643 PROG ID 032F-

		*					32F020 70
0677 1	0686	RTTBL	DC		TST01	DELAY PUNCH DATA	32F02080
0678 1	U6E7		DC	;' €'.	TST02	READ AND COMPARE	32F02090
U679 1	0721	÷1	DC		TST03	GRAPH PUNCH TIME	32F02100
067A 1	073C		DC	e, 11	TST04	GRAPH READ TIME	32F02110
067B 1	0752	LRTN	DC	1 19	TST05	MCDIFY DATA	32F02120
		-	44 ⁷ - 2	*		3.1. 自由的 10.2011 (2.3 5) (1.3 5) (1.3 5)	32F02130
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067C	0000		BSS	F	p. N. file		32F02160
067C 0		P6TM		, 1	14300		32F02170
067D 0	2968		DC		10600	MIN PUNCH TIME	32F02180
067E 0	0640	R6TM	DC	5 t	1600	MAX READ TIME	32F02190
C67F 0	0384	KOIII.	DC		900	MIN READ TIME	32F02200
0680 0	2FA8	P6AVG			12200	AVG PUNCH TIME	32F02210
		R6AVG			1300	AVG READ TIME	32F02220
0681 0	0514	*	טנ		1500	AAA KEAD TINE	32F02230
	0000		0.0		*-*	MOD NUM + SPEED SW	32F02240
0682 0	0000	MODNM					32F02250
0683 0	0000	PONLY			0	PUNCH ENLY SW	
0684 0	0001	ONE	DC		1		32F02260
0685 0	0005	FIVE	DC		5		32F02270
		*					32F02280
	•	*					32F02290
			****	***		*****	32F02300
		*					32F02310
		***				*****	32F02320
		*				ES CARDS USING DATA	32F02330
		*				THE DATA TABLE. IT PUNCHES	
		*	THE	FIR	ST 80 CARDS	WITH MAXINUM PUNCH DELAY.	32F02350
		#	THE	DEL	AY IS THEN	DECREASED ONE INCREMENT	32F02360
		*	FOR	E AC	H 80 CARDS	PUNCHED. PUNCH COLUMN	32F02370
		*	INTE	RRU	PT TIME IS	ALSO CHECKED.	32F02380
	. "1	*					32F02390
		*					32F02400
0686 0	6102	TST01	LDX	1	2		32F02410
	66000A72		LDX		ALDBK		32F02420
	440009F2		BSI	L		PRINT MSG- LOAD BLANKS	32F02430
068B 0	1040		SLT		32	and the second second second	32F02440
	DC000818		STD	L	TAVG	The state of the s	32F02450
	D400081A		STO	ī	AVGCT		32F02460
0086 01	D400001A	*	310	-	~****		32F02470
0690 0	C053	T010	LD		PDMAX		32F02480
	C053	1010	STO		PDLAY	RESET PUNCH DELAY	32F02490
0691 0	D04F		STX		PDWAS	RESET FORCH DEENT	32F02500
0692 0	684F	_	217		PUNAS		
		*	·			********	32F02510
0693 0	-	T011	LDX		80	INITIALIZE PUNCH TABLE	32F02520
	C500UAD2		LD	Ll	PDATA-1	CLEAR TERM RITE	32F02530
0696 0	1804		SRA		4	CLEAR TERM BITS	32F02540
0697 0	1004		SLA		4		32F02550
	D5000AD2		STO		PDATA-1		32F02560
069A 01	D5000F22		STO		PDATA+79	STO IN IMAGE TABLE	32F02570
069C 0	71FF		MDX	1	-1		32F02580
0695 0	70F6		MDX		-T011+1		32F02590
		*					32F02600
069E 01	65000AD3	T012	LDX	LI	PDATA	SET FOR START OF	32F02610
06A0 0	6927		STX			ROTATE PATTERN	32F02620
320		★ 10 4 2	regard.	-			32F02630
0(11 01	C40005E1	T013	LD	L	Sh2	CK SW2 FOR CONSTANT CELAY	32F02640
UDAL	100C		SLA		12	CLEAR HIGH DRDER BITS	32F02650
			SRA				32F02660
06A3 0			BSC		2		32F02670
06A3 0 06A4 0	180C	* · ·					
06A3 0 06A4 0 06A5 0	180C 4820	* ; r			DDI AV	The state of the s	
06A3 0 06A4 0	180C 4820		STO		PDLAY		32F02680
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06A3 0 06A4 0 06A5 0 06A6 0	180C 4820 D03A 74000683		STO	£	PCNLY	SKIP IF NOT MCD	32F02680 32F02690 32F02700
06A3 0 06A4 0 06A5 0 06A6 0 06A7 01 06A9 0	180C 4820 D03A 74000683 7002		MDX MDX		PCNLY *+2	SKIP IF NOT MCD	32F02680 32F02690 32F02700 32F02710
06A3 0 06A4 0 06A5 0 06A6 0 06A7 01 06A9 0	180C 4820 D03A 74000683		STO	L	PCNLY	SKIP IF NOT MCD CK FOR BLANK CARD	32F02680 32F02690 32F02700 32F02710 32F02720
06A3 0 06A4 0 06A5 0 06A6 0 06A7 01 06A9 0	180C 4820 D03A 74000683 7002 440007D7		MDX MDX		PCNLY *+2	SKIP IF NOT MCD CK FOR BLANK CARD	32F02680 32F02690 32F02700 32F02710

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

1442 TIMING TEST, A PROMOTE STATE OF THE STA

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1442 TIMING TEST	
1442 TIMING TEST	

06AD 0	F034		EOR		PDWAS	IF PUNCH DELAY CHANGED	32F02750 -
06AE 01	4C1806C7		BSC	L	T014,+-	PRINT MSG	32F02760
0680 01	678006E1	. 8	LDX		PDLAY	XR3=PUNCH DELAY FACTOR	32F02770
	682F		STX	_	PDWAS	SAVE LAST PUNCH DELAY	32F02780
06B3 01 (ADFCT+2	LD 1053 CODE	32F02790
06B5 01 I			510	L		STC DLY FACT CODE IN MSG	32F02800
	CUZD		LD	17.3	DINCR	LD PNCH DLY INCR	32F02810
	A028		M		PDLAY	MULT BY PNCH DLY FACTOR	32F02820 - 32F02830
	1090		SLT	٠	16 PDBAS	ADD PNCH DELAY BASE	32F02640
	802B		A .		MAXPD	SET MAX PNCH DLY IN MSG	32F02850
06BB 01 I			STO	۲,	6	MSG NUMBER	32F02860
	6106		LDX		APDLY	M30 NOMBER	32F02870 -
06BE 01 (6301		LDX	3			32F02880
0661 01			STX		SMSG+2	SET MSG DATA CONTROL	32F02890
0603 01			BSI	Ĺ	TYPE	PRINT MSG- PUNCH DELAY	32F02900
0003 01		*				-	32F02910
06C5 01 d	6C0008FD		STX	L	LOCP	SET LOGP ADDRS	32F02920
06C7 00 (T014	LDX	L3	*-*	SET TO PUNCH DATA	32F02930
0609 01	44000765		BSI	L	PUNCH		32F02940
		*					32F02950
06CB 01	44000796		BSI	L	COMPR	COMPARE COL INTRPT TIMES	32F02960
	0912		DC		PCMAX		32F02970
	0913		DC		PCMIN		32F02980
06CF 01			BSI	L	LOCK	CK FOR LOCK ON FUNCTION	32F02990
		*		_		ACH BUNCH ADDDC	32F03000
06D1 01			MDX	L	T014+1-1	ADV PUNCH ADDRS CK FOR END OF PUNCH	32F03010 32F03020
	COF4		ΓÞ		TO14+1	DATA TABLE	32F03030
	900E		S B SC	L	T013,+	CONTINUE IF NOT END	32F03040
06D5 01	7 -	*	D 3C	٠.	101317	CONTINUE IT HOT END	32F03050
		*			DEC PUNCH	DELAY THEN RESTART	32F03060
		*			PUNCH PATT		32F03070
							32F03080
06D7 01	C40005DF		LD	L	SWO		32F03090
	1009		S_A		9	LOOK AT FORCE LGG SW	32F03100
06DA 0	6306		LDX	3	6	SET MSG DATA CONTROL	32F03110
06DB 01	44100766		BSI	L	TYAVG	PRINT AVG COL TIME MSG	32F03120
		*					32F03130
06DD 01	74FF06E1		MOX	L	POLAY,-1		32F03140
	703£		MQX		T012		32F03150
06E0 0	70AF	_	MDX		T010	IF ZERC RESET	32F03160 32F031 7 0
		*	0.0		*-*	PUNCH DELAY FACTOR	32F03170
		PDL AY			*-*	LAST PUNCH DELAY SAVED	32F03190
		PDWAS END PD			PDATA+79	ERST FORCE DEER SAVES	32F03200
		PDMAX			4	MAX PUNCH DELAY INCR	32F03210
0024 0		*					32F03220
		*					32F03230
06E5 0		DINCR	DC		37		32F03240
		*			-	•	32F03250
06E6 0 . (0089	PDBAS	DC .		185		32F03260
		*					32F03270
		*					32F03280
		****	****	***		******	32F03290
		*				NE 02 - READ AND COMPARE	32F03300
		*****				************	32F03310
		*	THIS	RO	UTINE READS	THE CARD WHICH WERE	32F03320
		*	PUNC	нED	BY ROUTINE	ONE. IT COMPARE THE DATA	32F03330
		*				TA. IT ALSO CHECK THE READ	32F03340 32F03350
	•	*	CULU	MIN .	INTERRUPT: T	INC.	32F03360
		*					32F03370
0453.0		* TST 02	1.0		POM V	SKIP IF NOT MOD	32F03380
06E7 0		TST 02				BR IF MCD	32F03390
	44200654		BSI			SET MSG NUMBER	32F03400
	6103 66000AB2				ALPC		32F03410
					TYPE	PRINT MSG- LCAD PNCHC CDS	
	440009F2		BSI		TYPE	PRINT MSG- LEAD PNCHE CDS	

06FF 0	10A0.		SLT		32	Editor Communication (Communication)	32F03430
06F0 01	10A0 DC000618 D400081A		STD	L	TAVG	to the state of the second of	32F03440
06F2 01	D400081A		STG	L	AVGCT		32F03450
		*					32F03460
U6F4 01	65000AD2	T 02 1	LDX	Ll	PDATA-1	SET FOR START OF PATTERN	32F03470
06F6 0	6907		STX	1	T023+1		32FU348U
		*			0540	en e	32F03490 32F03500
06F7 01	44000784	T022	BSI	L	READ		32F03500
06F9 0	1010	•	SRA		16	SET FOR FIRST ERROR	
	1810 D40008E4			Ĺ	M	SET FOR FIRST ERROR	32F03520 32F03530
06FC 0				1	ï	XR3=COLUMN COUNT	32F03540
001 0		*		-			32F03550
06FD 00	C5000000	T023	LD	Ll	*-*	LD CATA PUNCHED	32F03560
06FF 01	6D000918		STX	Ll	COL	LD CATA PUNCHED STO COLUMN COUNT CLEAR STOP PUNCH BIT	32F03570
0701 0	1804		SRA		4	CLEAR STOP PUNCH BIT	32F03580
0 7 02 0	1004		SLA		4		32F03590
	D400090F		510	L	DATA+1	STO DATA S/B CCMPARE WITH DATA READ	32F03600
	F 500 UB 74		EUK	LI	KIBL 7	CLMPAKE WITH GATA KEAD	32F03620
C709 0	4420088B 7101		MU A D 2 I	٠,	1	ADV TO NEXT COLUMN	32F03630
0709 0	1101	*	PIU X	•	•	STO COLUMN COUNT CLEAR STOP PUNCH BIT STO DATA S/B CCMPARE WITH DATA READ BR IF ERROR ADV TO NEXT COLUMN	32F03640
0704 01	C4000918		LD	L	CCL	CHECK FOR LAST COL READ	32F03650
	940U090C		S	L			32F03660
	4C2806FD		BSC	L	T023.+Z	LCCP UNTIL LAST COL	32F03670
		*					32F03680
	44000796	T024		L	COMPR	COMPARE COL INTRPT TIMES	32F03690
0712 1	0914		DC		RDMAX		32F03700
0713 1	0915		DC .		RDMIN		32F03710 32F03720
0714 01	740106FE	•	MDV		T02241.1		32F03720
0714 01			LD	-	T023+1		32F03740
0717 0							32F03750
-	4C2806F7		BSC	L	T022.+Z	CONTINUE TO END OF PATTERN	32F03760
		*					32F03770
071A 01	C40005DF		LD	L	CUA		32F03780
U71C 0	1009		SLA		9		32F03790
071D 0	630A	•	LDX	3	/A	SET MSG DATA CONTROL PRINT AVG COL TIME MSG	32F03800
071E 01	44100706		BSI	L	TYAVG	PRINT AVG COL TIME MSG	32F03810 32F03820
0720 0	7 0D3	*	MD X		T021	REINITIALIZE	32F03830
		•	****	k = k = k :	*****	******	32F03840
		*				NE 03 - PUNCH TIME GRAPH	32F03850
		*** **	****	***		******	32F03860
	•	*	THIS	TE	ST WILL STO	RE THE TIME BETWEEN PUNCH	32F03870
		*				WHILE PUNCHING A CARD. ON	32F03880
		*				ILL PUNCH A GRAPH WHICH	32F03890
		*				TION IN COLUMN INT TIME FRM	32F03900
		*				THIS PROCESS WILL BE LAST CARD INDICATOR IS	32F03910 32F03920
		*	SENSE		D ONLIF INC	LASI CARD INDICATOR IS	32F03930
		*	3EN30				32F03940
		*					32F03950
0721 0	6102	TST03	LDX	1	2		32F03960
	660U0A72		LDX		ALDBK		32F03970
0724 01	440009F2		BSI	L	TYPE	PRINT MSG- LUAD BLANKS	32F03980
		•					32F03990
0726 0	1810		SRA		16	· · · · · · · · · · · · · · · · · · ·	32F04000
C727 01	D40006E1		STO	L	PDLAY	RESET PUNCH DELAY	32F04010
0720 0	4150	*	100	٠,	80		32F04020 32F04030
0729 0	6150 D5000B74	T031	LDX STD		RTBL		32F04040
072K 01	71FF	1091	MDX		-1		32F04050
0720 0	70FC		MDX	•	T031		32F04060
	670U0B75			L3	RTBL+1	SET TO PUNCH BLANKS	32F04070
	44000765		BSI	L	PUNCH		32F04080
	6C0008FD	T032		L		SET LOOP ACORS	32F04090
0754 01	67800A02		LDX	13	PAVG		32F04100

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144	2	TI	NC	TE	CT
144	_		 NG	15	21

	**************	32F0486 32F048
	* PUNCH	32F0482
	***********	32F 0483
	* THIS SUBROUTINE PUNCHES ONE CARD THEN CHECKS FOR PUNCH ERRORS	32F0484 32F0485
	* THEN CHECKS FOR PUNCH ERRORS THE ADDRESS OF THE PUNCH DATA TABLE MUST B	32FU463 32F0486
	# IN XR3 NPON ENTRY.	32F0487
	* IN XR3 UPON ENTRY.	32F0488
	PUNCH DC +-+ STK L3 COLPC SET TO PUNCH 1ST COL MD K 3 79 SET TERMINATOR IN	32F0489
0765 C 0000	PUNCH: DC ## 10 - +++ # 18 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	32F0490
0766 01 6F000960	STX L3 COLPC SET TO PUNCH 1ST COL	32F0491
768 0 734F	MDK 3 79 SET TERMINATOR IN	32F0492 32F0493
0769 0 6BFA 0764 0 C300	STK 3 PTERM PUNCH DATA LD 3 0	32F0494
768 01 EC000821		32F0495
076D 01 20000021		32F0496
		32F0497
076E 01 440009B8	BSI L READY CK FOR READY	32F0498
0770 O1 65000A5F		32F0499
0772 01 6D000903	STA IN STA LI OP AND AND THE THE THE	32F0500
0774 01 6C0008E6		32F0501
0776 0 6150	LDM 180 SET COL COUNT XIO STPCH START PUNCH	32F0502 32F0503
0777 0 08EA 0778 01 44000919	XID STPCH START PUNCH BS1 L WAIT WAIT FCR INTERRUPT	32F0504
0778 01 44000919		32F0505
711M UL 767000FU	* * * * * * * * * * * * * * * * * * *	32F0506
D77C D1 C4800764	LD I PTERM REMOVE TERMINATOR	32F0507
077E 0 1804	SRA 4	32F0508
D77F 0 1004	POSLA 4 CONTRACTOR CONTRACTOR CONTRACTOR	32F0509
0780 01 D4800764	STO I PTERM	32F0510
		32F0511
0782 01 4C800765	BSC I PUNCH RETURN	32F0512 32F0513
	***********	32F0514
	* READ	32F0515
	**********	32F0516
± subtract	* THIS SUBROUTINE READS ONE CARD THEN CHECKS FOR READ ERRORS.	32F0517
	* CHECKS FOR READ ERRORS.	32F0518
	• · · · · · · · · · · · · · · · · · · ·	
		32F0519
	· 1987年 - 1987年	32F0519 32F0520
	* READ DC *-*	32F0519 32F0520 32F0521
0785 01 4400Ü988	* READ DC *-* BSI L READY CHECK FCR READY	32F0519 32F0520 32F0521 32F0522
0785 01 44000988 0787 01 65000A5C	* READ DC *-* BSI L READY CHECK FCR READY	32F0519 32F0520 32F0521 32F0522 32F0523
0785 01 44000988 0787 01 65000A5C 0789 01 6D000903	* READ DC *-* BSI L READY CHECK FCR READY	32F0519 32F0520 32F0521 32F0522
0785 01 44000988 0787 01 65000A5C 0789 01 6D000903 0788 0 1010	* READ DC *-* BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STD L RPSW SET RD/PCH SW TD RD	32F0519 32F0520 32F0521 32F0523 32F0523 32F0525 32F0525
0785 01 44000988 0787 01 65000A5C 0789 01 6D000903 0788 0 1010 078C 01 D40008E6	* READ DC *-* BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STD L RPSW SET RD/PCH SW TD RD	32F0519 32F0520 32F0521 32F0523 32F0523 32F0525 32F0525
0785 01 44000988 0787 01 65000A5C 0789 01 65000903 0788 0 1010 0786 01 D40008E6 078E 0 6150	* READ DC *-* BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STD L RPSW SET RD/PCH SW TD RD	32F0519 32F0520 32F0521 32F0523 32F0523 32F0525 32F0525
0785 01 44000988 0787 01 65000A5C 0788 01 6D000903 0788 0 1010 0786 01 D40008E6 0786 0 6150 0786 01 0C000760	* READ DC *-* BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STO L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XIO L STRD START READ BSI L WAIT WAIT FCR INTERRUPT	32F0519 32F0520 32F0521 32F0523 32F0524 32F0525 32F0526 32F0527 32F0527
0785 01 44000988 0787 01 65000A5C 0789 01 6D000903 0788 0 1010 0786 01 040008E6 0786 01 0C006760 0791 01 44000919	* READ DC *-* BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STO L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XIO L STRD START READ BSI L WAIT WAIT FCR INTERRUPT *	32F0519 32F0520 32F0521 32F0523 32F0524 32F0526 32F0526 32F0527 32F0527 32F0528
0785 01 44000988 0787 01 65000A5C 0789 01 65000903 0788 0 1010 078C 01 D40008E6 078E 0 6150 078F 01 0C006760 0791 01 44000919	* READ DC *-* BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STD L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XID L STRD START READ BSI L WAIT WAIT FCR INTERRUPT * BSC I READ++Z RETURN	32F0519 32F0520 32F0521 32F0523 32F0524 32F0525 32F0526 32F0527 32F0528 32F0530 32F0530
0785 01 44000988 0787 01 65000A5C 0789 01 65000903 0788 0 1010 078C 01 D40008E6 078E 0 6150 078F 01 0C006760 0791 01 44000919	* READ DC *-* BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STD L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XID L STRD START READ BSI L WAIT WAIT FCR INTERRUPT * BSC I READ++Z RETURN MDX READ+1	32F0519 32F0520 32F0521 32F0522 32F0524 32F0525 32F0527 32F0528 32F0528 32F0531 32F0531
0785 01 44000988 0787 01 65000A5C 0789 01 65000903 0788 0 1010 0786 01 D40008E6 078F 01 0C006760 0791 01 44000919 0793 01 4CA80784	* READ DC *-* BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STD L RPSW SET RD/PCH SW TD RD LDX 1 80 SET COL COUNT XIO L STRD START READ BSI L WAIT WAIT FCR INTERRUPT * BSC I READ++Z RETURN MDX READ+1	32F0519 32F0520 32F0521 32F0523 32F0525 32F0525 32F0526 32F0526 32F0530 32F0530 32F0531 32F0531
0785 01 44000988 0787 01 65000A5C 0789 01 6D000903 0788 0 1010 0786 01 D40008E6 078F 0 6150 078F 01 0C000760 0791 01 44000919	* READ DC *-* BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STD L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XID L STRD START READ BSI L WAIT WAIT FCR INTERRUPT * BSC I READ+2 RETURN MDX READ+1	32F0519 32F0520 32F0521 32F0522 32F0524 32F0525 32F0527 32F0528 32F0528 32F0531 32F0531
0785 01 44000988 0787 01 65000A5C 0789 01 6D000903 0788 0 1010 0786 01 D40008E6 078F 0 6150 078F 01 0C000760 0791 01 44000919	* READ DC *-* BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STO L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XIO L STRD START READ BSI L WAIT WAIT FCR INTERRUPT * BSC I READ++Z RETURN MDX READ+1 *	32F0519 32F0520 32F0521 32F0523 32F0524 32F0525 32F0526 32F0526 32F0526 32F0530 32F0530 32F0530 32F0531
0785 01 44000988 0787 01 65000A5C 0789 01 6D000903 0788 0 1010 0786 01 D40008E6 078F 0 6150 078F 01 0C000760 0791 01 44000919	* READ DC *-* BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STD L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XIO L STRD START READ BSI L WAIT WAIT FCR INTERRUPT * BSC I READ+2 RETURN MDX READ+1 * COMPARE COLUMN TIME	32F0519 32F0520 32F0521 32F0523 32F0524 32F0526 32F0527 32F0527 32F0527 32F0530 32F0531 32F0533 32F0533 32F0533
0785 01 44000988 0787 01 65000A5C 0789 01 6D000903 0788 0 1010 0786 01 D40008E6 078F 0 6150 078F 01 0C000760 0791 01 44000919	# READ DC	32F0519 32F0520 32F0522 32F0523 32F0525 32F0526 32F0526 32F0530 32F0530 32F0531 32F0533 32F0533 32F0533 32F0533 32F0533 32F0533
0785 01 44000988 0787 01 65000A5C 0789 01 6D000903 0786 01 D40008E6 078E 0 6150 078F 01 0C000760 0791 01 44000919 0793 01 4CA80784 0795 0 70EF	* READ DC *-* BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STO L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XIO L STRD START READ BSI L WAIT WAIT FCR INTERRUPT * BSC I READ+Z RETURN MDX READ+1 * * * ** ** ** ** ** ** ** ** ** ** *	32F0519 32F0520 32F0521 32F0523 32F0525 32F0526 32F0526 32F0530 32F0531 32F0533 32F0533 32F0533 32F0533 32F0533 32F0536 32F0536 32F0536
0785 01 44000988 0787 01 65000A5C 0789 01 6D000903 0788 0 1010 0786 01 D40008E6 078F 0 6150 078F 01 0C000760 0791 01 44000919 0793 01 4CA80784 0795 0 70EF	# READ DC #-# BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STO L RPSW SET RD/PCH SW TD RD LDX 1 80 SET COL COUNT XIO L STRD START READ BSI L WAIT WAIT FCR INTERRUPT # BSC I READ+* Z RETURN MDX READ+1 * * *******************************	32F0519 32F0520 32F0521 32F0523 32F0524 32F0526 32F0526 32F0528 32F0528 32F0533 32F0533 32F0533 32F0534 32F0534 32F0535 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536
0785 01 44000988 0787 01 65000A5C 0789 01 65000903 0788 0 1010 078C 01 D40008E6 078F 0 6150 078F 01 0C006760 0791 01 44000919 0793 01 4CA80784 0795 0 70EF	# READ DC #-# BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STO L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XIO L STRD START READ BSI L WAIT WAIT FCR INTERRUPT # BSC I READ++Z RETURN MDX READ+1 # **********************************	32F0519 32F0520 32F0521 32F0523 32F0526 32F0526 32F0527 32F0527 32F0530 32F0530 32F0531 32F0533 32F0533 32F0533 32F0534 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536
0785 01 44000988 0787 01 65000A5C 0789 01 65000903 0788 0 1010 078C 01 D40008E6 078F 0 6150 078F 01 0C000760 0791 01 44000919 0793 01 4CA80784 0795 0 70EF	# READ DC #-# BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STD L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XID L STRD START READ BSI L WAIT WAIT FCR INTERRUPT # BSC I READ+* RETURN MDX READ+1 # ** COMPARE COLUMN TIME ************************************	32F0519 32F0520 32F0521 32F0523 32F0526 32F0526 32F0526 32F0527 32F0530 32F0532 32F0533 32F0533 32F0534 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536
0785 01 44000988 0787 01 65000A5C 0789 01 65000903 0788 0 1010 078C 01 D40008E6 078F 0 6150 078F 01 0C006760 0791 01 44000919 0793 01 4CA80784 0795 0 70EF	# READ DC #-# BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STD L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XIO L STRD START READ BSI L WAIT WAIT FCR INTERRUPT # BSC I READ++Z RETURN MDX READ+1 # * * * * * * * * * * * * * * * * * *	32F0519 32F0520 32F0522 32F0523 32F0525 32F0526 32F0526 32F0530 32F0531 32F0531 32F0533 32F0533 32F0533 32F0533 32F0533 32F0533 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536
078F 01 0C0UC760 0791 01 44000919 0793 01 4CA80784 0795 0 70EF	# READ DC #-# BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STO L RPSW SET RD/PCH SW TD RD LDX 1 80 SET COL COUNT XIO L STRD START READ BSI L WAIT WAIT FCR INTERRUPT # BSC I READ.+Z RETURN MDX READ+1 * * *******************************	32F0519 32F0520 32F0522 32F0523 32F0525 32F0526 32F0526 32F0530 32F0531 32F0531 32F0531 32F0533 32F0533 32F0533 32F0533 32F0533 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536
0785 01 44000988 0787 01 65000A5C 0789 01 65000903 0788 0 1010 078C 01 D40008E6 078F 0 6150 078F 01 0C006760 0791 01 44000919 0793 01 4CA80784 0795 0 70EF	# READ DC #-# BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STO L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XIO L STRD START READ BSI L WAIT WAIT FCR INTERRUPT # BSC I READ++Z RETURN MDX READ+1 * * *******************************	32F0519 32F0520 32F0521 32F0523 32F0525 32F0526 32F0526 32F0530 32F0531 32F0531 32F0533 32F0533 32F0533 32F0534 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0540 32F0544
0785 01 44000988 0787 01 65000A5C 0789 01 6D000903 0788 0 1010 0786 01 D40008E6 078F 0 6150 078F 01 0C000760 0791 01 44000919 0793 01 4CA80784 0795 0 70EF	# READ DC #-# BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STO L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT X10 L STRD START READ BSI L WAIT WAIT FCR INTERRUPT # BSC I READ++Z RETURN MDX READ+1 * * *******************************	32F0519 32F0520 32F0521 32F0523 32F0524 32F0526 32F0526 32F0526 32F0528 32F0530 32F0531 32F0533 32F0533 32F0534 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0540 32F0540 32F0542 32F0542 32F0543
0785 01 44000988 1787 01 65000A5C 1789 01 6D000903 1786 01 D40008E6 1786 01 D40008E6 1786 01 0C000760 1791 01 44000919 1793 01 4CA80784 1795 0 70EF	# READ DC #-# BSI L READY CHECK FCR READY LDX L1 ARD STX L1 DP SLA 16 STO L RPSW SET RD/PCH SW TO RD LDX 1 80 SET COL COUNT XIO L STRD START READ BSI L WAIT WAIT FCR INTERRUPT # BSC I READ++Z RETURN MDX READ+1 * * *******************************	32F0519 32F0520 32F0521 32F0523 32F0524 32F0526 32F0526 32F0526 32F0528 32F0530 32F0531 32F0533 32F0533 32F0534 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0536 32F0540 32F0540 32F0542 32F0542 32F0543

	100		# J . 1	*					PAVG = 12200	32F04110 32F04120
	1.00			and 🖣 and t		2.5	4	muy!	PAVG = 6000	32F04120
				*	367		C C . O	CET UD	GRAPH	32F04140
			440007E5		BSI		GRAPH TIME+2		PUNCH GRAPH	32F04150
			67000BC9		LDX	L3		251 10	PUNCH GRAPH	32F04160
-	073A	0	402A		BSI		PUNCH			32F04170
3	1,7		to the contract	*	il e					32F04170
	1222			* 4			T 033	DEBEAT	LATTI LACT CARD	32F04190
	073B	0	70F6	4	MDX		T032	KEPEAI	UNTIL LAST CARD	32F04190
				*		بستند	 Lakara akarakan		* * * * * * * * * * * * * *	32F04210
		9.			****	****			READ TIME GRAPH	32F04220
				*					*********	32F04230
			1.4.3						NK CARD, STOPE THE	32F04240
5			P . "	*	THIS	5 IE:	SI WILL KE	AL A CLA	INTERRUPTS, THEN	32F04250
			e je	*	DIME	DE	WEEN KEAL	DLAVING	THE VARIATION IN	32F04260
				*	COL	JI A	GRAPH DIS	TIME ED	M COLUMN TO COLUMN.	
				*	TULL	ו אותכ	INTERNUTI	DE DEDE	ATED UNTIL THE LAST	32F04280
				*			DICATOR IS			32F04290
					CARL	TINE	JICATOR 13	SENSED.		32F04300
				*						32F04310
	0726	٠,	64200402	TST04		L	PONLY			32F04320
			C4000683	15104			CNTRL ,Z	BR IF	MCD 5	32F04330
			44200654		E S I			JR 11	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	32F04340
			6102		LDX		ALDBK			32F04350
			66000A72	10 miles	351		TYPE	PRINT	MSG- LCAD BLANKS	32F04360
			1810		SRA		16		LUD LUND DEANNS	32F04370
			D40006E1	** *	STD		PDLAY	RESET	PUNCH DELAY	32F04380
	0140	O1	D40000E1	1 🛓	3.0	_	, DEA,		TONOT DEED	32F04390
	074.9	ΔÍ	440007D7	T041	BSI	1	CKBLK	READ A	BLANK CARD	32F04400
	0140	O1	44000101	*	031		CKDEK		411.0	32F04410
	07/ 8	01	67800A03	· ·	LDX	13	RAVG	XR3=RF	AC TIME AVG	32F04420
	UITA	UI	01000403	*	LUX		NA VO		RAVG = 1300	32F04430
	- 1 k			*					7 RAVG = 1000	32F04440
				*						32F04450
	0740	01	440007E5	•	BSI	1	GRAPH	SET UF	GRAPH	32F04460
4			67000BC9		LDX		TIME+2		PUNCH GRAPH	32F04470
			4014		BSI		PUNCH	77		32F04480
	0.50	•		*			41.4.1.4.1			32F04490
	0751	0	70F6		MDX		T041	REPEAT	UNTIL LAST CARD	32F04500
		-		*			• 5			32FC4510
	. 2 . 2			***	****	****	*****	*****	****	32F04520
				*					- MODIFY DATA	32F04530
	1		e week a second	****					****	32F04540
				*	THIS	S RO	JTINE WILL	. READ DI	NE DATA CARD AND	32F04550
				*					ARE MITH THE DATA	32F04560
				*					THE ROUTINE WILL	32F04570
				* ,	THE	N RE	START THE	PROGRAM	FROM ROUTINE ONE.	32F04580
				*						32F04590
				*						32F04600
	0752	C	4031	TST05	BSI		READ	READ A	A CARD	32F04610
				#						32F04620
			6 7 80090C				COLCT		DELMN COUNT	32F04630
			C7000B74	T 05 1	LD		RTBL		DATA READ	32F04640
			D7000AD2		STO		PDATA-1		N PUNCH TABLE	32F04650
	0759		73FF		MDX		-1		NEXT COLUMN	32F04660
	075A	C	70FA	*	MDX		T051	LOOP L	INTIL LAST COL	32F04670
٠.				*	1				1~	32F04680
			6C0005E0		STX		SW1		TRL TO RESTART RTN	* ** ** ** ** ** ** ** ** ** ** ** ** *
	075 D	01	44000654	4 2	BSI	Ĺ	CNTRL	GO 10	CNTRL RTN	32F04700
					7 1	145	e Č			32F04710
				*						32F04720
		41.5	0000	* ,			1. 2 mg			32F04730
ť	C760		0000	C.T.C.	BSS	E	ere ere ere		e name to be a second	32F04740
	C760		0000	STRD	DC		*-*	TANT	DEAD IDEC	32F04750
	0761		1404	CENC	DC	9-y-	/1404	SIAKI	READ ICCC	32F04760 32F04770
. * *	0762		0000	STPCH			*-* 71601	CTADT	PUNCH IDCC	32F04770
	.0163	U	1401	in the second	DC		/1401	SIAKI	FUNCH TUCC	32FU418U
	CATE		02JAN66	5 01MAY	66	1 5NO)Vo6			PROG IC
	EC NO). ·	415490	41549		419				PAGE

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02JAN66 01MAY66 15NDV66 415490 4154908 419643

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1442 TIMING TEST

			*					32F06150
07DB	01	6780090C		LDX	13	CULCT	VERIFY THAT CARD	32F06160
		C7000B74	CKB 01			RTBL	IS BLANK BEFORE	32F06170
07DF (01	4C20082C		BSC	L	ERRO,Z	PUNCHING IT	32F06180
07E1 (0	73FF		X GM	3	-1		32F06190
07E2 (0	70FA -		MDx		CKB01	LOOP UNTIL LAST COL	32F06200
07E3 (01	4C8007D7		BSC	1	CKBLK	RETURN	32F06210
			*					32F06220
			*****	***	***	******	****	32F06230
1.0			*			GRAPH SETUI	Port Miller and the control of the c	32F06240
		- ·	*****	***	÷ ÷ •	*****	******	32F06250
			*	THIS	SU	SKOUTINE WIL	LL CALCULATE A GRAPH	32F06260
			*				UMN TIME. THIS SET OF	32F06270
			*	GRAP	H PE	INTS WILL	BE PUNCHED ON THE NEXT	32F06280
			*	CARD	. 1	THE SCALE CA	AN BE CHANGED WITH A	32F06290
			* .	FNC .	3 B I	IT SWITCH E	NTRY.	32F06300
			*					32F06310
			*					32FC6320
07E5	С	0000	GRAPH	DC		*-*		32F06330
07E6	0	6B36		STX	3	AVG	STO AVG TIME	32F 06340
07E7		6201		LDX	2	1		32F06350
07E8		6A33		STX		TEMP+1	SET SCALE FACTOR	32F06360
			.*					32F063 70
07E9 (01	C40005E2		LD	L	S m3	CK FOR NEW SCALE ENTRY	32F06380
07EB		100C		SLA		12	CLEAR UNWANTED BITS	32F06390
07EC		180C		SRA		12		32F06400
07ED		4820		BSC		Z	SKIP IF NO NEW SCALE	32F06410
07EE (DOZD		STO		TEMP+1		32F06420
	_		*					32F06430
07EF (01	6780090C		LDX	13	COLCT	XR3=COL CNT	32F06440
07F1		73FF		MDX	3	-1		32F06450
07F2		C029		LD		TEMP+1	LOAD SCALE FACTOR	32F06460
07F3	-,	A02B		M		HUND	CAL SCALE	32F 06470
07F4		1090		SLT		16		32F06480
07F5		D028		STO		SCALE	SAVE SCALE	32F06490
·	•	3 - Say - Sa	* -					32F06500
07F6	o i	C026	GRPH1	LD		AVG	LD AVG TIME	32F06510
		97000BC 8		S	L3	TIME+1	SUB ACTUAL TIME	32F06520
07F9		1890		SRT		16		32F06530
O7FA		A823		D		SCALE	DIVIDE BY SCALE	32F06540
07F8		DOIF		STC		TEMP		32F06550
		65800818		LDX	11	TEMP	t e e	32F06560
OFFE (7104			1		XR1=GRAPH BIT POSITION	32F06570
07FF		1000		NOP				32F06580
0800		CO1F		LD		K8000	LD A BIT	32F06590
0801		1900		SRA	1	and the second s	SHIFT TO GRAPH POSITION	32F06600
0802		1804	8	SRA	-	4		32F06610
0803		1004		SLA				32F06620
		D7000BC 9			L3	TIME+2	STC GRAPH BIT IN PNCH BUF	
0806 (73FF		MUX		-1	ADV TO NEXT COL	32F06640
0807		70EE		MDX	_	GRPH1	LOOP UNTIL LAST COL	32F06650
		6780090C		LDX	13	COLCT		32F06660
		C7000BC8		LD		TIME+1	that the street of the second	32F06670
0800				OR		K0008	SET LAST COL BIT	32F06680
		D7000BC8		STC	L3	TIME+1		32F06690
1000	-	5.55556	*					32F06700
080F 1	31	6580081C		LDX	11	TEMP+1	XR1=SCALE FACTOR	32F06710
0811		7102		MDX		2		32F06720
0812		COOD		LD	-	K8000	CONVERT SCALE FACTOR	32F06730
0813		1900		SRA	1	0	TC CARD IMAGE	32F06 740
		D4000BC9		STO	L	TIME+2	SET TO PUNCH IN CD COL ONE	32F06750
		4C8007E5		BSC	Ī	GRAPH	RETURN	32F06 760
JU10 (-	.5000.69	*		-			32F06770
C818		0000		BSS	E	0		32F06780
0818	n	0000	TAVG	DC DC	_	*-*	TOTAL COL TIME	32F06790
		0000		DC		*-*	-, -	32F06800
UBIG 4	•					*-*	COL CNT FOR AVG	32F06810
0819	n.	0000	AVGCT	UL			CUE CIVI FUN AVO	
0819 (081A (081B (0000	AVGCT TEMP	DC		*-*	CUE CRI FOR AVO	32F06820

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

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1442 TIMING TES	1442	TI	MIN	G T	ES1
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0797 01 65800796		IDX I	LCOMPR	XR1=CALL ADDRS+1	32F054 7 0
		LDX		XR3=COL NUMBER	32F05480
0799 0 6301		LUA,		AND-COE NOT BEN	32F05490
	* :	44730			and the second s
C79A 0 7301	COMP1	MDX	3 1	ADV COL NUMBER	32F05500
079B 01 6F000918		STX L	COL		32F05510
0790 01 04000918		LD L	COL	LD CCL NUMBER	32F05520
				COMPARE WITH COL CNT	32F05530
C79F 01 9400090C		S L			
07A1 01 4C30U7BB		BSC L	COMP3Z	CK CN PRINT AVG	32F05540
	*				32F05550
07A3 00 C5800000		LD I	1 0	LD MAX COL TIME	32F05560
			TIME	COMPARE WITH ACTUAL	32FG5570
07A5 01 970COBC7					32F05580
07A7 01 4408U8A3		BSI L	ERR10 ++	BR IF TC LONG	
	*				32F05590
07A9 00 C5800001		LD I	1 1	LD MIN COL TIME	32F05600
07AB 01 97000BC7		S L	3 TIME	COMPARE WITH ACTUAL	32F05610
•		BSI L	· · ·	BR IF TC SHORT	32F05620
07AD 01 441008BC		531 L	T.V.V.T.T.A.	DK II TO SHORT	32F05630
	*				
07AF 01 C7000BC7	COMP2	LD L	3 TIME	TOTAL ALL COL TIME FOR AVG	
07B1 0 1890		SRT.	16		32F05650
07B2 0 8865		AD	TAVG		32F05660
			TAVG		32F05670
07B3 0 D864		STD		ABU COL CAT FOR AUG CALC	
0784 01 7401081A		MDX L	AVGCT 1	ADV COL CAT FOR AVG CALC	32F05680
0786 0 70E3		MDX	COMP1		32F05690
	*				32F05700
C787 0 10A0	•	SLT	32	RESET IF OVER FLOW COL CNT	
				MEDEL II OFEN FEUR COL CIT	32F05720
0788 0 D061		STO	AVGCT	1 - a *	
0789 O D85E		STD	TAVG		32F05 73 0
078A 0 70DF		MDX	COMP1		32F05740
	*				32F05750
0788: 01 C40G05DF	COMP3	LD L	SWO		32F05760
	COMPS		The state of the s	LOOK AT FORCE LOC CH	32F05770
07BC 0 1009		SLA	9	LOOK AT FORCE LOG SW	
07BE 00 67008002		LDX L	3 /8002	SET DATA CENTREL	32705780
07CU 01 442807C6		BSI L	TYAVG ++Z	PRINT AVG COL TIME MSG	32F05 79 0
	*			* #.# · · · · · · · · · · · · · · · · · ·	32F05800
0702 01 74020796		MDX L	COMPR .2		32F05810
0162 01 17026170					
07C4 01 4C80C796	_	BSC I			32F05820
	*	BSC I	COMPR	in a second of the second of t	32F05820 32F05830
	•	BSC I	COMPR	*****	32F05820
	•	BSC 1	COMPR	RRUPT AVERAGE TIME	32F05820 32F05830
	****	BSC 1 ****** PRINT	COMPR ************************************	RRUPT AVERAGE TIME	32F05820 32F05830 32F05840 32F05850
	*****	BSC I ****** PRINT	COMPR ************************************	RRUPT AVERAGE TIME	32F05820 32F05830 32F05840 32F05850 32F05860
	*****	BSC I ****** PRINT (****** THIS S	COMPR ************* COLUMN INTER ************* JBROUTINE CA	RRUPT AVERAGE TIME	32F05820 32F05830 32F05840 32F05850 32F05860 32F05870
	*****	BSC I ****** PRINT (****** THIS S	COMPR ************* COLUMN INTER ************* JBROUTINE CA	RRUPT AVERAGE TIME	32F05820 32F05830 32F05840 32F05850 32F05860 32F05870 32F05880
	*****	BSC I ****** PRINT (****** THIS S	COMPR ************* COLUMN INTER ************* JBROUTINE CA	RRUPT AVERAGE TIME	32F05820 32F05830 32F05840 32F05850 32F05860 32F05870 32F05880 32F05880
	*****	BSC I ****** PRINT (****** THIS S	COMPR ************* COLUMN INTER ************* JBROUTINE CA	RRUPT AVERAGE TIME	32F05820 32F05830 32F05840 32F05850 32F05860 32F05870 32F05880
07C4 01 4C80C796	*****	BSC I ****** PRINT ****** THIS SI AVERAG	COMPR ************* COLUMN INTER ************* JBROUTINE CA	RRUPT AVERAGE TIME	32F05820 32F05830 32F05840 32F05850 32F05860 32F05870 32F05880 32F05880
07C4 01 4C80C796	*****	BSC I ****** PRINT ***** THIS SI AVERAG	COMPR *************** COLUMN INTER *********** JBROUTINE CA E THEN PRINT	RRUPT AVERAGE TIME LCULATES THE COLUMN TIME S THE AVERAGE MESSAGE.	32F05820 32F05830 32F05840 32F05850 32F05860 32F05870 32F05880 32F05880 32F05890 32F05910
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850	*****	BSC I ****** PRINT ****** THIS SI AVERAG DC LDD	COMPR ***********************************	RRUPT AVERAGE TIME	32F05820 32F05830 32F05840 32F05850 32F05860 32F05860 32F05880 32F05880 32F05890 32F05910 32F05910
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851	*****	PRINT (************************************	COMPR *************** COLUMN INTER ************* JBROUTINE CA E THEN PRINT *-* TAVG AVGCT	CALCULATE AVG	32F05820 32F05830 32F05840 32F05860 32F05860 32F05870 32F05880 32F05890 32F05910 32F05910 32F05920 32F05930
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850	*****	PRINT INTERPRETATION OF THE PRINT INTERPRETATION OF T	COMPR ***********************************	CALCULATE AVG	32F05820 32F05830 32F05840 32F05860 32F05860 32F05870 32F05880 32F05890 32F05910 32F05910 32F05920 32F05930 32F05940
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851	*****	BSC I ******* PRINT '****** THIS SI AVERAG DC LDD D STO L	COMPR *************** COLUMN INTER ************* JBROUTINE CA E THEN PRINT *-* TAVG AVGCT	CALCULATE AVG	32F05820 32F05830 32F05840 32F05860 32F05860 32F05880 32F05880 32F05890 32F05910 32F05910 32F05930 32F05930 32F05930
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107	*****	BSC I ****** PRINT ******* THIS S AVERAG DC LDD D STO L LDX	COMPR *************** COLUMN INTER ********** JBROUTINE CA E THEN PRINT *-* TAVG AVGCT CTAVG 1 7	CALCULATE AVG	32F05820 32F05830 32F05840 32F05860 32F05860 32F05870 32F05880 32F05990 32F05910 32F05920 32F05930 32F05930 32F05940
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E	*****	BSC I ****** PRINT ****** THIS SI AVERAG DC LDD D STO L LDX LDX LDX	COMPR *************** COLUMN INTER *********** BROUTINE CA E THEN PRINT	CALCULATE AVG SET IN MSG SET MSG NUMBER	32F05820 32F05830 32F05840 32F05860 32F05860 32F05870 32F05880 32F05990 32F05910 32F05910 32F05930 32F05930 32F05930 32F05940 32F05950 32F05950
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD	*****	BSC I ****** PRINT ****** THIS S AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LSTX L	COMPR **************** COLUMN INTER ********** BROUTINE CA E THEN PRINT *-* TAVG AVGCT CTAVG AVGCT CTAVG 17 2 ACOLT 3 SMSG+2	CALCULATE AVG	32F05820 32F05830 32F05850 32F05860 32F05860 32F05870 32F05880 32F05990 32F05910 32F05910 32F05920 32F05930 32F0595930 32F0595930 32F0595950 32F0595950
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E	*****	BSC I ****** PRINT ****** THIS SI AVERAG DC LDD D STO L LDX LDX LDX	COMPR ***********************************	CALCULATE AVG SET IN MSG SET MSG NUMBER	32F05820 32F05830 32F05840 32F05860 32F05870 32F05880 32F05890 32F05990 32F05910 32F05910 32F05920 32F05930 32F05930 32F0595930 32F059595
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD	*****	BSC I ****** PRINT ****** THIS S AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LSTX L	COMPR **************** COLUMN INTER ********** BROUTINE CA E THEN PRINT *-* TAVG AVGCT CTAVG AVGCT CTAVG 17 2 ACOLT 3 SMSG+2	CALCULATE AVG SET IN MSG SET MSG NUMBER	32F05820 32F05830 32F05850 32F05860 32F05860 32F05870 32F05880 32F05990 32F05910 32F05910 32F05920 32F05930 32F0595930 32F0595930 32F0595950 32F0595950
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2	*****	BSC I ****** PRINT ****** THIS S AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LSTX L	COMPR **************** COLUMN INTER ********** BROUTINE CA E THEN PRINT *-* TAVG AVGCT CTAVG AVGCT CTAVG 17 2 ACOLT 3 SMSG+2	CALCULATE AVG SET IN MSG SET MSG NUMBER	32F05820 32F05830 32F05840 32F05860 32F05870 32F05880 32F05890 32F05990 32F05910 32F05910 32F05920 32F05930 32F05930 32F0595930 32F059595
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0	*****	BSC I ******* PRINT ****** THIS SI AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LSTX L SST L SLT	COMPR ***************** COLUMN INTER ************* JBROUTINE CA E THEN PRINT *-* TAVG AVGCT CTAVG 17 2 ACOLT 3 SMSG+2 TYPE 32	CALCULATE AVG SET IN MSG SET MSG NUMBER	32F05820 32F05830 32F05840 32F05860 32F05870 32F05880 32F05890 32F05990 32F05910 32F05920 32F05920 32F05930 32F05940 32F0595930 32F05960 32F05960 32F05960 32F05970 32F05980 32F05990
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844	*****	BSC I ******* PRINT ******* THIS S AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LDX LDX L	COMPR ***************** COLUMN INTER *********** JBROUTINE CA E THEN PRINT *-* TAVG AVGCT CTAVG 1 7 2 ACOLT 3 SMSG+2 TYPE 32 TAVG	CALCULATE AVG SET IN MSG SET MSG NUMBER	32F05820 32F05830 32F05840 32F05860 32F05860 32F05870 32F05890 32F05990 32F05910 32F05910 32F05920 32F05930 32F05940 32F05950 32F059590 32F05960 32F05970 32F05970 32F05980 32F05990 32F05990 32F05990 32F06000 32F06010
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045	*****	BSC I ****** PRINT ******* THIS S AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LDX LDX L	COMPR **************** COLUMN INTER *********** JBROUTINE CA E THEN PRINT *-* TAVG AVGCT CTAVG I 7 2 ACOLT 3 SMSG+2 TYPE 32 TAVG AVGCT	CALCULATE AVG SET IN MSG SET MSG NUMBER SET MSG DATA CCNTRGL	32F05820 32F05830 32F05840 32F05860 32F05860 32F05880 32F05880 32F05990 32F05990 32F05910 32F05930 32F05930 32F05950 32F05960 32F05960 32F05960 32F05960 32F05960 32F05990 32F05990 32F05990 32F06000 32F06010 32F06020
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844	****** ***** * TYAVG	BSC I ******* PRINT ******* THIS S AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LDX LDX L	COMPR ***************** COLUMN INTER *********** JBROUTINE CA E THEN PRINT *-* TAVG AVGCT CTAVG 1 7 2 ACOLT 3 SMSG+2 TYPE 32 TAVG	CALCULATE AVG SET IN MSG SET MSG NUMBER	32F05820 32F05830 32F05840 32F05860 32F05870 32F05870 32F05890 32F05990 32F05910 32F05910 32F05920 32F05930 32F05950 32F05960 32F05960 32F05960 32F05960 32F05960 32F05960 32F06000 32F06010 32F06010 32F06030
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045	****** * *** * TYAVG	BSC I ******* PRINT PRINT THIS SI AVERAG DC LDD D STO L LDX LDX LDX LDX LSTX L SSTX L SSTX L SSTD STO BSC I	COMPR ***********************************	CALCULATE AVG SET IN MSG SET MSG DATA CONTROL RETURN	32F05820 32F05830 32F05840 32F05860 32F05870 32F05880 32F05890 32F05990 32F05910 32F05920 32F05920 32F05950 32F05960 32F05960 32F05960 32F05970 32F05960 32F05960 32F06010 32F06010 32F06020 32F06030 32F06040
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045	****** * *** * TYAVG	BSC I ******* PRINT PRINT THIS SI AVERAG DC LDD D STO L LDX LDX LDX LDX LSTX L SSTX L SSTX L SSTD STO BSC I	COMPR ***********************************	CALCULATE AVG SET IN MSG SET MSG NUMBER SET MSG DATA CCNTRGL	32F05820 32F05830 32F05850 32F05860 32F05860 32F05870 32F05880 32F05990 32F05910 32F05910 32F05920 32F05930 32F05950 32F05950 32F05950 32F05960 32F05960 32F05960 32F05960 32F05960 32F05960 32F05960
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045	****** * *** * TYAVG	BSC I ******* PRINT PRINT THIS SI AVERAG DC LDD D STO L LDX LDX LDX LDX LSTX L SSTX L SSTX L SSTD STO BSC I	COMPR ***************** COLUMN INTER ************* JBROUTINE CA E THEN PRINT *-* TAVG AVGCT CTAVG 1 7 2 ACOLT 3 SMSG+2 TYPE 32 TAVG AVGCT TYAVG	CALCULATE AVG SET IN MSG SET MSG NUMBER SET MSG DATA CONTROL	32F05820 32F05830 32F05840 32F05860 32F05870 32F05880 32F05890 32F05990 32F05910 32F05920 32F05920 32F05950 32F05960 32F05960 32F05960 32F05970 32F05960 32F05960 32F06010 32F06010 32F06020 32F06030 32F06040
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045	****** * ***** TYAVG	BSC I ******* PRINT ******* THIS SI AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LDX LDX L	COMPR ***********************************	CALCULATE AVG SET IN MSG SET MSG NUMBER SET MSG DATA CONTROL RETURN BLANKS	32F05820 32F05830 32F05840 32F05860 32F05860 32F05870 32F05880 32F05990 32F05910 32F05910 32F05920 32F05930 32F05940 32F059593 32F05960 32F05960 32F05970 32F05980 32F05990 32F06010 32F06020 32F06020 32F06030 32F06040 32F06050 32F06050
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045	****** * ****** * ******	BSC I ****** PRINT ****** THIS SI AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LDX LSTX L SSTX BSI *******	COMPR ***********************************	CALCULATE AVG SET IN MSG SET MSG NUMBER SET MSG DATA CCNTRGL RETURN BLANKS	32F05820 32F05830 32F05840 32F05860 32F05860 32F05880 32F05890 32F05990 32F05910 32F05910 32F05920 32F05930 32F05940 32F059590 32F05990 32F05990 32F05990 32F05990 32F05990 32F06000 32F06000 32F06010 32F06030 32F06030 32F06030 32F06030 32F06030 32F06030 32F06050 32F06050 32F06050
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045	****** ***** TYAVG	######################################	COMPR ***********************************	CALCULATE AVG SET IN MSG SET MSG NUMBER SET MSG DATA CENTROL RETURN BLANKS EECKS EACH CARD BEFORE	32F05820 32F05830 32F05850 32F05860 32F05860 32F05870 32F05880 32F05990 32F05910 32F05910 32F05920 32F05930 32F05950 32F05960 32F05960 32F05960 32F05960 32F06000 32F06010 32F06020 32F06040 32F06060 32F06060 32F06060 32F06060 32F06060 32F06070 32F06070 32F06080
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045	****** * ****** * ******	######################################	COMPR ***********************************	CALCULATE AVG SET IN MSG SET MSG NUMBER SET MSG DATA CCNTRGL RETURN BLANKS	32F05820 32F05830 32F05840 32F05860 32F05870 32F05880 32F05890 32F05990 32F05910 32F05920 32F05930 32F05960 32F05970 32F05960 32F05960 32F06010 32F06010 32F06020 32F06050 32F06050 32F06050 32F06050 32F06050 32F06050 32F06050 32F06050 32F06070 32F06070 32F06070
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045	****** ***** TYAVG	######################################	COMPR ***********************************	CALCULATE AVG SET IN MSG SET MSG NUMBER SET MSG DATA CENTROL RETURN BLANKS EECKS EACH CARD BEFORE	32F05820 32F05830 32F05850 32F05860 32F05860 32F05870 32F05880 32F05990 32F05910 32F05910 32F05920 32F05930 32F05950 32F05960 32F05960 32F05960 32F060600 32F06010 32F06020 32F06040 32F060600 32F060600 32F060600 32F060600 32F060600 32F060600 32F060600 32F060600 32F060600 32F060600 32F060600 32F060600 32F060600 32F060600 32F060600
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045	****** ***** TYAVG	######################################	COMPR ***********************************	CALCULATE AVG SET IN MSG SET MSG NUMBER SET MSG DATA CONTROL RETURN BLANKS HECKS EACH CARD BEFORE VERIFY THAT IT IS BLANK.	32F05820 32F05830 32F05840 32F05860 32F05870 32F05880 32F05890 32F05990 32F05990 32F05990 32F05990 32F05990 32F05990 32F05990 32F05990 32F05990 32F05990 32F06090 32F06000
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045 07D5 01 4C8007C6	****** * ***** T YA VG	BSC I ******* PRINT THIS SI AVERAG DC LDD D STO L LDX LDX LDX LSTX L BSI L SLT STD BSC I ****** THIS SI IT IS	COMPR ***********************************	CALCULATE AVG SET IN MSG SET MSG NUMBER SET MSG DATA CENTROL RETURN BLANKS EECKS EACH CARD BEFORE	32F05820 32F05830 32F05840 32F05860 32F05860 32F05880 32F05980 32F05990 32F05990 32F05990 32F05990 32F05990 32F05990 32F05990 32F05990 32F05990 32F05990 32F06000
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045 07D5 01 4C8007C6	****** ***** TYAVG	BSC I ******* PRINT ****** THIS SI AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LDX LDX LT STD STO BSC I ****** THIS SI IT IS	COMPR ***********************************	CALCULATE AVG SET IN MSG SET MSG NUMBER SET MSG DATA CONTROL RETURN BLANKS HECKS EACH CARD BEFORE VERIFY THAT IT IS BLANK.	32F05820 32F05830 32F05840 32F05860 32F05860 32F05870 32F05890 32F05990 32F05910 32F05920 32F05930 32F05940 32F05950 32F05960 32F05970 32F05980 32F05980 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06010 32F06100 32F06110 32F06120
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045 07D5 01 4C8007C6	****** * ***** T YA VG	BSC I ******* PRINT ****** THIS SI AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LDX LDX L	COMPR *************** COLUMN INTER ************ JBROUTINE CA E THEN PRINT *-* TAVG AVGCT CTAVG 2 ACOLT 3 SMSG+2 TYPE 32 TAVG AVGCT TYAVG ************* JBROUTINE CH PUNCHED TO V LOOP	RRUPT AVERAGE TIME ***********************************	32F05820 32F05830 32F05850 32F05860 32F05860 32F05870 32F05890 32F05990 32F05910 32F05920 32F05930 32F05950 32F05950 32F05950 32F05960 32F05960 32F06000 32F06010 32F06010
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045 07D5 01 4C8007C6	****** * ***** T YA VG	BSC I ******* PRINT ****** THIS SI AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LDX LDX LT STD STO BSC I ****** THIS SI IT IS	COMPR ***********************************	CALCULATE AVG SET IN MSG SET MSG NUMBER SET MSG DATA CONTROL RETURN BLANKS HECKS EACH CARD BEFORE VERIFY THAT IT IS BLANK.	32F05820 32F05830 32F05840 32F05860 32F05860 32F05870 32F05890 32F05990 32F05910 32F05920 32F05930 32F05940 32F05950 32F05960 32F05970 32F05980 32F05980 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06080 32F06010 32F06100 32F06110 32F06120
07C4 01 4C80C796 07C6 0 0000 07C7 0 C850 07C8 0 A851 07C9 01 D4000A01 07CB 0 6107 07CC 01 66000A9E 07CE 01 6F0009FD 07D0 01 440009F2 07D2 0 10A0 07D3 0 D844 07D4 0 D045 07D5 01 4C8007C6	***** **** TYAVG * * * * * * * * * * * *	BSC I ******* PRINT ****** THIS SI AVERAG DC LDD D STO L LDX LDX LDX LDX LDX LDX LDX L	COMPR *************** COLUMN INTER ************ JBROUTINE CA E THEN PRINT *-* TAVG AVGCT CTAVG 2 ACOLT 3 SMSG+2 TYPE 32 TAVG AVGCT TYAVG ************* JBROUTINE CH PUNCHED TO V LOOP	RRUPT AVERAGE TIME ***********************************	32F05820 32F05830 32F05850 32F05860 32F05860 32F05870 32F05890 32F05990 32F05910 32F05920 32F05930 32F05950 32F05950 32F05950 32F05960 32F05960 32F06000 32F06010 32F06010

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1442 TIMING TEST

44	2	TI		INC	T	ES1	1
	~		F1 .	LIVI		E 3 1	

	C81C 0	0000		DC		*-*	·	32F06830
	C81D 0	0000	AVG	DC		*-*		32F06840
	081E 0	0000	SCALE	DC		*-*		32F06850
	081F U	0026	HUND	DC .		38		32F06860
	0820 0	'80 00	K8000			/8000		32F06870
	0821 0	0008	K0U08	DC		/0008		32F06880
			*					32F06890
				****	****		********	32F06900 32F06910
	•		*	***			UNCTION ROUTINE *******	32F06910 32F06920
			*					32F06930
	0822 0	0000	LUCK	DC		*-*		32F06940
		C40005DF	20011	LD	L	SWO	LD SWO	32F06950
		EC800166		OR	ī	ERLCK	COME WITH MONITOR SWO	32F06960
	0827 0	100A		SLL		10	CHECK LCCK SW	32F06970
	0828 01	40900822		BSC	1	LOCK	BR IF NCT LOCK ON FUNC	32F06980
	082A 01	4C8UC8FD		BSC	I	LOOP	LCOP ON LAST FUNC	32F06990
			*		.1			32F07000
			*					32F07010
			****	****	***		****************	32F07020
			*	****			SAGE SETUP ********	32F07030 32F07040
			*			*****		32F07050
	082C 0	6100	ERRO	LDX	- 1	0	CARD NOT BLANK	32F07060
	082D 0	6200	L 0	LDX		70000	CANO NOT DEANN	32F07070
		CCOUOSCE		LDC	L	MSGO		32F07080
	0830 01	6C0008F9		STX	L	DPMSW	the state of the s	32F07090
	0832 01	440008EC		881	Ĺ	ETYPE	PRINT ERR MSG	32F0 7 100
		0 C00 08E6		XIO	L	STACK-1		32F07110
	0836 01	4C8007D7		BSC	1	CKBLK		32F07120
	0030	0.000	# ·	20		*-*	STATIC DSW ERROR	32F07130 32F07140
	C838 0	0000 740008E5	ERR 1	DC MDX	L	ERR5S.0	IF PREVIOUS ERRS	32F07150
	083B 0	7008		MDX	-	ERRIA	DO NOT PRINT THIS MSG	32F07160
	0830 0	6101		LDX	1	-1		32F07170
	0830 0			LDX	_	/3		32F07180
	083E 01	OG800033		LDD	L	MSG1	Section 1997	32F07190
i	0840 01	6C0008F9		STX	L	OPMSW		32F0 7 200
	0842 01	440008EC		BSI	. T	ETYPE	PRINT ERR MSG	32F07210
			*					32F07220
	0844 0	1011	ERR 1A	STO		17 ERR5S	RESET ERR5 SW	32F07230 32F07240
		D40008E5 4C300838		BSC	L	ERRI	RESET ERRY SW	32F07250
	0041 01	40000000	*	030	•	CKKZ		32F07260
	C849 0	0000	ERR 2	DC		*-*	BUSY DSW ERROR	32F07270
		CC0008E8		LDD	L	BDSW		32F07280
	084C 01	DCUUU90A		STD	L	DSW	SET BUSY DSW IN MSG	32F07290
	084E 0	6102		LDX		2		32F07300
	084F 0	6203		LDX		3		32F07310
		CC0008D2		LDD	· L	MSG2	DOINT EDD MCC	32F07320 32F07330
		440008EC		BSI BSC	L	ETYPE ERR2	PRINT ERR MSG	32F07340
	00J4 UI	40800849	*	. J.	1	LNNE	•	32507350
	0856 0	0000	ERR5	DC	*	*-*	INTRPT 4 DSW ERROR	32F07360
		6C0008E5		STX	·L	ERR5S	SET ERROR 5 SW	32F07370
		66000003		LDX	L2		SET DATA ID	32F0 7 380
	085B 01	F40008EA		EOR	L	DSW4	GET DSW S/B	32F0 7390
	085D 01	D40008EB		STO	L	DSW4+1	SET IN MSG	32F07400
		CCOOOBEA		LDD	L	DSW4	057 001 11 450	32F07410
		DC00090A		STD	L	DSW	SET DSW IN MSG	32F07420
	0863 0	1002		SLA BSC		2 ERR6,+Z	LOCK FOR ERR CK BR IF ERR CK	32F07430 32F07440
	U004 UI	4C28086D	*	63 C	L	LNNU 1 TL	DO II LAN CA	32F07450
4	0866 0	6105	-	LDX	1	5		32F07460
		CC000806		LDD	L	MSG5		32F07470
		440008EC		BSI	Ĺ	ETYPE	PRINT ERR MSC	32F07480
	0868 01	4C800856	ERR 5R	BSC	ì	ERR5		32F07490
		y file.	*					32F07500
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	EC NO.	415490	41549		419			PAGE
		*						

	C40008E6	ERR6	LD	L	RPSW	CK FOR PUNCH OPERATION	32F07510
	4C08087F		BSC	L	ERR7,+	BR IF NCT PUNCH	32F07520
	0C00095E			, L	COLRD	RD ECHO BITS	32F07530
-	C48UQ95E		LD		COLRD	OR TE NOT DUNCH OK	32F07540
	4C18G87F		BSC	L	ERR7,+-	BR IF NCT PUNCH CK	32F07550
	D40009UA		STO	L	DSW	STO ECHC IN MSG	32F07560 32F07570
0879 0	6106		LDX			the state of the s	
087A 0	6203		LDX	. 2	/3		32F07580
087B 0	C85C		FDD.		MSG6		32F07590
	440008EC		BSI	L		PRINT ERR MSG	32F07600
087E 0	70EC		MDX,		ERR5R		32F07610
		*			_	500 64	32F07620
087F 0	6107	ERR 7	LDX	. 1		ERR CK	32F07630
0880 0	C859		LDD		MSG7	0011 T FDD HCC	32F07640
	440008EC		BSI	Ļ		PRINT ERR MSG	32F07650 32F07660
0883 0	70E7		MDX		ERR5K		32F07670
		*				COL COUNT EDDOD	32F07680
0884 0	0000	ERR 8	DC		*-*	COL COUNT ERROR	32F07690
C885 0	6108		LDX		8		32F07700
0886 0	.620C		FDX	2	/C		32F07710
0887 0	C854		LDD		MSG8	DOTALL EDD MCC	
0888 0	4063		BSI		ETYPE	PRINT ERR MSG	32F07720
0889 01	40800884		BSC	I	ERR8		32F07730
		*		1		DATA CENDADE EDDOO	32F07740
0888 0	0000	ERR 9	DC		*-*	DATA COMPARE ERROR	32F07750
	F400090F		EOR	L		RESTORE TO DATA WAS	32F07760
	D400090E		STO	L.	DATA	cave vol	32F07770
0890 0	690D		STX	. 1	RX1+1	SAVE XR1	32F07780
0891 0	1040		SLT		32	CET FOR WHITE LINE MCC	32F07790
	6600C030		LDX		/C030	SET FOR MULTI LINE MSG	32F07800
	740008E4		MDX	L		CHECK FOR MULTI LINE	32F07810
0896 0	7005		MDX		ERR9A	BR IF FIRST LINE	32F07820
0897 0	684C		STX		M	SET MULTI LINE WORD	32F07830
0898 0			LDX	1		MESSAGE NUMBER	32F07840
	66004030		LDX	LZ	/4030	SET WORD CNTL	32F07850
0898 0	C842		LDD		MSG9	FOREN TYPE OUT	32F07860
089C 0	404F	ERR 9A			ETYPE	ERROR TYPE OUT	32F07870
	65000000	RX1	LDX		*-*	RESTORE XR1	32F07880
	0C0008E6		XIO	L		SELECT ERROR CARD	32F07890
08A1 01	40800686	_	BSC	I	ERR9	RETURN	32F07900
		*					32F07910
		*			12 2		32F07920
08A3 0	0000	ERR 10			*-*	CTO MOI	32F07930
08A4 0	6923		STX		EXR1+1	STO XR1	32F07940
08A5 0	6B24		STX		EXR3+1	STC XR3	32F07950
08A6 0	6110		FDX	1	/10	COL INTRPT SLOW	32F07960
08A7 0	C838		LDD		MSG10		32F07970
		*			44300	CET FOR BUNCH MCC	32F07980
	66004180		LDX		/4180	SET FOR PUNCH MSG	32F07990
	740008E6		MD X	Ļ		CK PUNCH/READ SW	32F08000
08AC 0	7010		MDX		ERX	BR IF PUNCH	32F08010
	66004480		LDX	LŽ	/4480	SET FOR READ MSG	32F08020
08AF 0	700D		MDX		ERX		32F08030
		*					32F08040
08BO 0	0000	ERR11		٠.	*-*	CTO VOI	32F08050
08B1 0	5916		STX		EXR1+1	STO XR1	32F08060
08B2 0	6817		STX		EXR3+1	STO XR3	32F08070
0883 0	6111		LDX	1	/11	COL INTRPT FAST	32F08080
08B4 0	C 82D		LDD		MSG11		32F08090
		*			44.206	SET FOR BUNG! MGG	32F08100
	66004280		FDX		/4280	SET FOR PUNCH MSG	32F08110
	740008E6		XCM	L	RPSW	CK PUNCH/READ SN	32F08120
08B9 0	7003		XCM		ERX	BR IF PUNCH	32F08130
	66004880		LDX	L2	/4880	SET FOR READ MSG	32F08140
08BC 0	7000		MD X		ERX		32F08150
0000	3.3.055	*	46.				32F08160
	740008E4	ERX	MDX	Ł	M		32F08170
08BF 0	7001		MDX		ERX1		32F08180
	•						
CATE FC NO.	02JAN66 415490	01MAY6		15Ni	3V66		PROG ID

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	•		F 75 1	Professional Space	2 77	• . *			100	, a *	21475
	080	G	7004		X CM		ERX2		32F08	8190	
	•			, •					32F08		
	08C 1	0	1840	ERX 1	SRT		.32	revenue o como conserva de la majoria.	32F0	8210	
	0802	00	76008000		XCM		/8000		32F0	8220	
	08C4	0	1000	in a second of the second of	NOP		* * * * * * * * * * * * * * * * * * *	er i Marie Marie III. Barriera de la companie de la compa	32F0	8230	
	_			*					32F0	3240	
	08C5	Ü:	4026	ERX2	128	4. 1	ETYPE	PRINT ERR MSG	32F0	8250	
	0806	0	681D		STX	5.5	M		32F0	8260	
٠.	08C 7	00	65000000	E XR 1	LDX	Ll	*-*	RESTCRE XR1	32F08	3270	
٠.	08C 9	00	67000000	EXR3	LDK	L3	*-*	RESTORE XR3	32F08	3280	
	OSC B	01	4C0007AF		B SC	L	COMP2	The second secon	32F08	3290	
	100	1		*	į.		1 2 3 1 2 3		32F08	3300	
	CBCE		6000		8 S S	E	1.1	Ç.	32F08		
	08CE	1	0A04	MSGO	DC	1	ACNBK	CARD NOT BLANK	32F08	3320	
	08CF	0	0000		DC	1.1	10000		32F08		
	CBDC	1	UAOC	MSG1	DC		AWAS	STATIC CSW ERROR	32F08		
	08D1	1	OALB		DC		ASDSW		32F08	3350	
	08 D 2	1	UAOC	MSG 2	DC		AWAS	BUSY DSW ERRCR	32F08	3360	
è	08D3	1	.0A24		DC		ABDSW		32F08		
	08D4	1.	0A18	MSG 3	DC		ADSW	NC INTERRUPT	32F08		
	08D5	1	0A34		DC		ANINT		32F08		
	C8D6	1	JOAU	MSG 5	DC		AWAS	LEVEL 4 DSW ERROR	32F08		
	08D7	1	OA 2C		DC		ADSW4		32F08		
	C8D8	1	OAOC	MSG6	DC		AwAS	PUNCH CHECK	32F0,		
	08D9	1	OA3A		DC		APCK		32F08		
	08DA	1	OAOC	MSG7	DC		AWAS	ERROR CHECK	32F08		
	08DB	1	0A40		DC		AECK		32F08		
	08DC		OAll	MSG8	DC		ADWAS	COLUMN COUNT ERROR	32F08		
	08DD	1	0A45		DC		ACCNT		32F08		
	08DE	1	OAOC	MSG 9	DC		AWAS	COLUMN DATA ERROR	32F08		
	C8DF		OA4C		DC		ADATA		32F08		
	08E0		OA7E	MSG 10			ATL	COL INTRPT SLOW	32F08		
	08E 1		0000		DC		/0000	· · · · · · · · · · · · · · · · · · ·	32F08		
	08E2		OASE	MSG11			ATS	COL INTRPT FAST	32F08		
	CBE 3	0	0000		DC		/0000		32F08		
		_		* .				MINITE ATAE CONTOCK ADDR	32F08		
	08E4		0000	. M	DC		*	MULTI LINE CONTROL WORD	32F08		
	08E5		0000	ERK5S			*-*	ERR5 SW	32F08		
	08E6		0000	RPSW	DC		*-*	REAC/PUNCH SW	32F08		
	08E 7		1480	STACK			/1480	SELECT =2 STACKER	32F08		
	08E8		0000	BDS in	DC		*-*	BUSY DSW WAS	32F08		
	08E9		0003	Demo	DC DC		/0003 *-*	S/B INT 4 CSW WAS	32F08		
	C8EA		0000	DSw4	DC		*-*	S/B	32F08		
	C8EB	U	0000	•	UC			37 b	32F08		
				*				******	32F08		
				*				ERROR MESSAGE	32F08		
					****	***		*********	32F0		
				*				PRINTS ALL THE ERROR MESSAGES.	32F08		
				*				E MSG NO. MUST BE SET IN XRI.	32F08		
				*				N XK2, AND THE ALPHA ADDRS IN	32F08		
				*			JA AND		32F08		
				*					32F08		
				*					32F08	_	
	CREC	0	0000	ETYPE	חכ		*-*		32F08		
	08ED		6917	2	STX		EMSG	SET MSG NUMBER	32F08		
			6A18		STX		EMSG+		32F08		
	08EF		D818		STD	_	EMSG+		32F08		
			C7000BC7		LD	1.3	TIME		32F08		
	08F 2		DOLE		STO		TIMHS		32F08		
	JU: 2	-		*	5				32F08		
	08F3	01	740008F9	-	MDX	· L	OPMSN	PRINT LAST OP MSG IF	32F08		
	C8F5		7004		MDX	-	ETYP1		32F08		
			44800162		BSI	1	ERROR		32F08		
	08F8		OSFF		DC	-	ETYP2		32F08		
	08F 9		0000	OPM SA			*-+	MUST BE ZERO FOR OP MSG	32F08		
		-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	*	=				32F08		
	U8FA	00	44800162	ETYP1	BSI	1	ERROR	PRINT ERROR MESSAGE	32F08		
		-									
			•								
	CATE		02JAN66	DIMAY	66	1 5N	3 V66	•	PRO	G ID	0

	1442				· 선 : 영향 . 교 : 전략	7 807 8 074	i di ja Nati e	7			프립트를 프로마트 중취 - 중	
et i	08FC 08FD 08FE	0	0905 0000 68FA	\$ 1 m	LOOP;	DC DC STX		EMSG +-+ DPMSw	15.4	LOOP ADDRS SET HERE	32F08870 32F08880 32F08890	
		4, 37	4C8U08EC	*94		BSC	I			RETURN	32F08900 32F08910	
	6901		8000	τ. ···	411	DC .	Pp:	/8000	252 B	100 - 100 -	32F08920 32F08930 32F08940	
	0902 0903		0A56 0000		.DP	DC.	3 8°.	*-*	distriction	Burgara Berasak Burgasa da Berasa da Karangara	32F08950 32F08960	
			undasta No		*	ERRO	ME	SSAGE	TABLE		32F08970 32F0898C	
٠.	0904		0001	5.7	*						32F08990 32F09000	
	0905				EMSG	DC		*-*		MESSAGE NUMBER	32F09010	
	0906							/7F8C		HEX/DEC SW	32F09020	
	0907					DC DC	• **	*-* *-*		DATA I/D Alpha Acdrsi	32F09030 32F09040	
			0000			DC		*-*		ALPHA ADDRS2	32F09050	
	0,0,		:		*						32F09060	
	090A		0000		DSW	DC		*-*		DSW WAS	32F09070	
	090B		0.000		501.57	DC		*-*		DSW S/B	32F09080 32F09090	
	090C		0000 0050		COLCT	DC.		*-* 80		COLUMN COUNT WAS COLUMN COUNT S/B	32F09100	
	090E	-	0000		DATA			*-*			32F09110	
	090F					DC		*		READ DATA S/B	32F09120	
	0910		0000			DC		0000		NOT USED	32F09130	
	0911		0000		TIMWS.			*-* 7180		TIME WAS MAX PUNCH COL TIME	32F09140 32F09150	
	0912				PCMIN			5300		MIN PUNCH COL TIME	32F09160	
	0914				RDMAX			1300		MAX READ COL TIME	32F09170	
	0915	0	028 C		RDMIN			700		MIN READ COL TIME	32F09180	
	0916		0000			DC		0000		NOT USED	32F09190	
	0917 0918		0000		COL			0000 *-*		NOT USEC COL IN ERROR	32F09200 32F09210	
	0410	U	0000		*	JC .		,		COL III ENNOR	32F09220	
					***	****	* * * *	*****	***	*****	32F09230	
					*					AIT ROUTINE	32F09240	
										***************	32F09250	
										TS FOR INTERRUPT. IS RECEIVED IT WILL	32F09260 32F09270	
										ELECTION SWITCH.	32F09280	
										S BEEN SELECTED IT	32F09290	
					*	WILL	BRA	ANCH TO	THE	CONTROL ROUTINE.	32F09300	
					*						32F09310 32F09320	
	0919	0	000υ		WAIT	מכ		*-*			32F09330	
	C91A		1810	,		SRA		16			32F09340	
	091B	0	B008			STC		M		RESET MULT LINE CONTROL	32F09350	
	091C					STC		COLCT		RESET COLUMN COUNT	32F09360	
	0910		DODE 69EE			STC		OPMSh COLCT+		RESET OF MSG SK	32F09370 32F09380	
			65001000			LDX		/1000		SET INTERRUPT	32F09390	
	0921		6926			STX		WCNT		WAIT CNT	32F09400	
	0922		0841			XIO		SENSE		SENSE BUSY DSW	32F09410	
	0923	0	D0C4		_	STC		BDSW			32F09420	
	0924	01	650u092D		* WAIT1	I D X	1 1	WAIT3			32F09430 32F09440	
			740005E6		774 11	MDX	L			OK FOR INTERRUPT	32F09440	
	0928		7015			MDX	_	WAIT4		BR IF INTERRUPT OCCURED	32F09460	
	22.7				*	32					32F09470	
			60005E5		WAIT2			ML SCF		SET RETURN ADDRESS	32F09480	
	0928	υÜ	44600161		. ·	BSI	1	START		GO TO MONITOR	32F09490 32F09500	
	0920	.01	74FF C948		WAITS	MDX	L	WCNT,-		DECREMENT WAIT CNT	32F09510	
	092F		70F4			XCM	_	WAIT1			32F09520	
	0930		C037			LO .		BDSm		CK BUSY DSW	32F09530	
	0931	0	F087			EOR		BDSW+1			32F09540	

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1442 TIMING TEST

								032
	ty, two	•					32710220	4
100	÷.		****	k 4: **	******	******	32F10210 32F10220	
	en e	*			INTERRUPT	ROUTINE	32F10200	
		****	****	k (* * :	*******	******	32F10180 32F10190	
C96D 0	C800	KC800			/C800	grade a grade de	32F10170	
096C 0	EFFE	KEFFE		*.	/EFFE		32F10160	
096A 0 096B 0	0 6 00 17 02	KOB OO SNC DM			/0800 /1702		32F10140 32F10150	
0969 0	1402	FEED			/1402	FEED IOCC	32F10130 32F10140	
0968 0	FFFF		DC	•	/FFFF		32F10120	
0967 0	1100		DC	1	/1100		32F10110	
0965 U 0966 1	0968		DC		TERM	35.135 D38 1000	32F10100	
0964 0	0000 1700	SENSE	DC DC		0 /1700	SENSE DSW IDCC	32F10080 32F10090	
0963 0	1701	SNCOL		•	/1701	SENSE AND RESET DSW IDCC		
0962 0	0000	RDATA			0000	LAST READ DATA	32F10060	
0961 0	1100		DC		/1100	PUNCH IDCC	32F10050	
C960 0	0000	COLPC			*-*		32F10040	
095E 1 095F 0	0962 · 1200	CULKU	DC		/1200	READ CCL IOCC	32F10030	
095E	0000	COLRD	BSS	E	RDATA		32F10010 32F10020	
	0000	* .	0.5	-	4 - 1 -		32F10000	
0958 01	40800919	_	BSC	I	WAIT	RETURN TO TEST RTN	32F09990	
	40020906		BSC	L	LSTCD.C	BR IF LAST CARD	32F09980	
0958 0	1004		SLA		4		32F09970	
0957 0	C092	•	LD		DSw4	CK FOR LAST CARD	32F09960	
		*					32F09940 32F09950	
0955 01	44200884	_	BSI	L	ERR8.Z	BR IF CCL COUNT ER	32F09930	
0954 0	FOB 9		EOR		COLCT+1	COMPARE WITH S/B	32F09920	
0953 0	COB8		LD		COLCT	CK COLUMN COUNT	32F09910	
0421 01	44200856	*	BSI	L	ERR5,Z	UN IF ENN	32F09900	
0950 0	E01B		AND		KEFFE	MASK LAST CD AND NRCY BR IF ERR	32F09880 32F09890	
094F 0	FO1A		EOR		KU800	REMOVE RESPONSE BIT	32F09870	
094E 0	C098		LD		DSh4	CK INT 4 DSW	32F09860	-
		*					32F09850	
U776 U1	77600077	*	031	_		A Company	32F09840	
094B 0	F09D 44200849		EOR BSI	L	BDSW+1 ERR2,Z	BR IF ER	32F09830	
094A 0	C09D		LD		BDSW	CK BUSY DSW	32F.09810 32F.09820	
0949 0		RTRN	SLT		32	CH BUCK BSI	32F09800	
		*					32F09790 -	
		*		ocr	CHE KETUKN		32F09780	•
						TERRUPT AND CHECK FOR ING TO TEST ROUTINE	32F09760 32F09770	•
	•					******	32F09750	
		****			******	* * * * * * * * * * * * * * * * * * * *	32F09740	
		*			ERROR ANA	LYSIS	32F09730	
0948 0	0000	WCN I	DC				32F09720	
0049	0000	* WCNT	DC		*-*		32F09700	
0946 00	44800161	_	851	I	START		32F09690 32F09700	
	44200654		BSI	Ļ	CNTRL,Z	BR IF NEW RTN	32F09680	
0942 01	940005DD		S	L	RID	CK FOR NEW ROUTINE	32F09670	
	44880161		851	ī	START ++	CK FOR RTN SELECT	32F09660	
093E 01	C40005E0	WAIT4	LD	L	Sw1		32F09650	
0936 01	6F0005E6		STX	L3	MLSCF+1		32F09640	
	67800919		LDX		WAIT	SET TO RETRY FUNCTION	32F09620 32F09630	
0939 0	40B2		BSI		ETYPE	PRINT ERR MSG	32F09610	
0938 0	C823		LDD		MSG3	MSG- NC INTRPT	32F09600	
0937 0	6201		LDX		/0001	SET WORD CATL	32F09590	
0935 0 0936 0	D004 6103	ERk3	STO	1	DSW 3	MESSAGE NUMBER	32F09580	
0934 0	U82F		OIX		SENSE	SENSE DSW STORE DSW IN MSG	32F09560 32F095 7 0	
	44200849		BSI	L	ERR2,Z	BR IF ER	32F09550	

096E 0	0000	INTR-D	٠ <u>٠</u>	*-*		32F10230
096F 0				SVXR1+1	SAVE XRI	32F10240
0970 0	6A1F			SVXR2+1	SAVE XR2	32F 10250
0971 0	6201	_Ĺ	DX 2	1	RESET CCL CNT	32F10260
	650000E1			225	RESET TIMER	32F10260 32F10270
0974 0	08EF		013	SENSE	JENJE DJM	32F10280
	4C08099D		SC L	RDCGL ++	BR IF READ COL INT	32F10290
0977 0	102D		LA	45	TIMING ADJUST	32F 10300
0978 0	7034		DX	PCH		32F10310
		*				32F10320
0979 0	7201	INTRI M	DX 2	1	ADV COL CNT	32F10330
	60000BC7			TIME		32F10340
	650000BE	SPD2- L		190	RESET TIMER	32F10350 32F10360 32F10370
	C4000EC7		D L		LD TIMER CNT	32F10360
0980 01	D6000BC7			TIME	STO TIME/COLUMN	32F10370
0982 0	08E1	х	(10	SENSE ·	SENSE DSW	32F10380
0983 0	180E	S	RA	14		32F10390
	4CU409A3	В	SC L	PCCOL .E	BR IF PUNCH COL INT	32F10400
0986 0	1801	S	RA	1		32F10410
	4C04C99D	В	SC L	RDCOL,E	BR IF READ COL INT	32F10420
		*				32F10430
		* .	P COMP	LETE		32F10440
		* -				32F10450
0989 0	72FF	ų	1DX 2	-1	DEC FOR CORRECT COL CNT	32F10460
098A U	1000		IOP			32F10470
	6E00C90C	S	TX L2	COLCT	STC COL CNT	32F10480
098D 00	650000ú0	SVXR1 L	DX L1	*-*	RESTORE XR1	-32F10490
	66000000	SVXR2 L	DX L2	*-*	RESTORE XR2	32F10500
0991 01	4C80C96E	8	SC I	INTR	BR CUT OF INTR	32F10510
		*				32F10520
C993 0	000C	INTR2 D	C	*-*	and the second of the second o	32F10530
0994 0	0805	х	0.13	SNC CM-1	SENSE-RESET DSW	32F10530 32F10540
	D40008EA	- S	TO L	DSW4	STC DSW	32F10550
0997 01	67000949	L	DX L3	RTRN	•	32F 1.0560
0999 01	6F0005E6	. S	TX L3	MLSCF+1	SET FOR RETURN	32F10570
0998 01	40800993	В	SC I	INTR2	BR CUT CF INTR	32F10580
		*				32F10590
		≠ • R	READ CO	LUMN INTERR	LPT	32F10600
		*				32F10610
C99D 0	08C0	RDCDL X	OID	COLRD	READ A COLUMN	32F10620
099E 0	COC3	L	. D	RDATA	LD DATA	32F10630
099F 01	D600UB74	S	TO L2	RTBL	STC DATA/CCL	32F10640
09A1 0	101B	S	LA	27	TIMING ADJUSTMENT	32F10650
09A2 0	700D	M	IDX .	INTR3	and the second second	32F10660
		*				32F10670
		* P	UNCH C	OLUMN INTER	RUPT	32F10680
		*		* - *.		32F10690
09A3 01	678006E1	PCCOL L	.DX 13	PDLAY	LD DELAY CNT	32F10700
09A5 0	7300			0	CK FOR MIN DELAY	32F10710
C9A6 0	7001		ID X	DLPCH	•	32F10720
09A7 0	7005		IDX	PCH		32F10730
09A8 U	7125	DLPCH M		37	ADV TIMER	32F10740
09A9 0	100C				TIMING ADJUSTMENT	32F10750
OPAA O	73FF			-1	DECR DELAY CNT	32F10760
COAB O	70FC		IDX	DLPCH	LOOP UNTIL CAT ZERO	32F10770
OPAC O	1006	S	LA	6	TIMING ADJUSTMENT	32F10780
		*	1.		en en la companya de	32F10790
C9AD O	0882	PCH X	:10	COLPC	PUNCH COLUMN	32F10800
09AE 01	74010960	. м	DX L	COLPC • 1	ADV FOR NEXT COL.	32F10810
		* .				32F10820
100		*				32F10830
1.30	and the second second				UTINE DETEMINES THE	32F10840
	 1 + 3 - 5 - 6 			TWEEN COLUM	N INTERRUPTS	32F10850
		*				32F10860
100	4 - 4 - 4	* -				32F10870
0980 U	0881	INTR3 X	10	SNCOL -1	SENSE-RESET DSW	32F10880
		*				32F10890
09B1 0	08B2	TIMER X	IC	SENSE	SENSE DSW	32F10900
100	14 14 15					
		·			•	
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IBM MAI	NTENANCE DI	AGNOS TI	C PRO	GRA	M FOR THE :	1130 SYSTEM	PART NO.	
							PAGE	• 9
1442 TI	MING TEST							
0982 0	EOBA		ANU		KC 600	MASK ALL BUT 0,1,4	32F10910	
	40200979			L		BR IF INTERRUPT	32F10920	4 2
0985 0	7126	SPD3		1	38	ADV TIMER	32F10930	
0986 0 0987 0	70FA 70D5		MDX.		TIMER SVXR1	LOCP FCR 30 MSEC	32F10940 32F10950	
C751 U	1005	* "	HUX		247//7		32F10960	
		****	****	* **	*****	***********	32F10970	
		*			CHECK REAL		32F10980	
		****	****	* * *	******	******	32F 10990 32F 11000	
C9 88 0	0000	READY	DC		*-*		32F11010	
0989 0	1040	NCAU.	SLT		32		32F11020	
098A 0	08A9		XIC		SENSE	SENSE DSW	32F11030	
and the second of	DC00090A		STE	L	DSh	STCRE DSW	32F11040	
	4C9809B8		BSC	1	READY ++-		32F11050 32F11060	
09BF 0	1801 44200836		SRA BS1	L	l ERR1,2	REMOVE NRDY BR IF CTHER THAN NRDY	32F11070	
2,00 01	77200000	*	031	-	CARLY Z	on it office their mot	32F11080	
0902 0	1011	BOX	SLA		17		32F11090	
09C3 U	DO11		STE		BCNT	RESET BOX CNT	32F11100	
		*				. D. OFFATOV. 48005	32F11110	
	650009CA	BOX 1	LDX		BOX2 MLSCF+1	LD REENTRY ADDRS SET MLSCF	32F11120 32F11130	
	6D0005E6 4C00093E	•	STX	Ĺ	WAIT4	GD TO MCNITOR	32F11140	
	40000732	*	000	-		00 10 1101121011	32F11150	
09CA 0	0899	BOX2	XIC		SENSE	SENSE DSW	32F11160	
	40980988		BSC	I	READY	RETURN IF READY	32F11170	
	7403C9D5		MD'X	L	BCNT,3		32F11180	
09.CF 0	70F4	•	MDX		BOX1		32F11190 32F11200	
09D0 U	6105	NRDY	LDX	1	5	MESSAGE NUMBER	32F11210	
	6600UA66		LDX	_	ANRDY	NOT READY	32F11220	
09D3 0	401E		351		TYPE	PRINT MESSAGE	32F11230	
0904 0	70ED		MDX		BOX		32F11240	
0905 0	0000	* BCNT	DC		*-*		32F11250 32F11260	
0905 0	0000	*	DC		4-4		32F11270	
•		*** **	****	* * * :	*****	******	32F11280	
	* ,	*			FEED LAST		32F11290	
		****	****	***	*****	*****	32F11300 32F11310	
0906-01	670U0A63	LSTCD	LDX	L3	AFD		32F11320	
	6FJ0U903		STX		OP		32F11330	
09DA 0	088D		XIO		FEED-1	FEEC LAST CARD	32F11340	
		*					32F11350	
09DB 0	6104		LDX	1	ALCD		32F11360 32F113 7 0	
09DE 0	66000A78 4013		BSI	LZ	TYPE	PRINT MSG- LAST CARD	32F11380	
0,02	.023	*					32F11390	2
09DF 0	1810		SRA		16		32F11400	
	D40005E1		STO	L	SH2	RESET DELAY FACTOR	32F11410	
09 E2 01	D40005E2	_	STO	L	S#3	RESET GRAPH SCALE	32F11420	
NGE4 NI	C40005DD	*	LD	L	RID	LD LAST RTN NUMBER	32F11430 32F11440	
09E6 0	900A		S	-	THE	CK FOR ROUTINE 1 OR 2	32F11450	
	44300654		BSI	L	CNTRLZ	BR IF NCT 1 OR 2	32F11460	
	Value of the second	*			ing a specific of		32F11470	
	C40005DF		LD	L	SWO :	LOCK AT EDDCE LOC SE	32F11480	
09EB 0	1009: 6302	V · · ·	SLA LDX	3	9	SET FOR AVG CNLY	32F11490 32F11500	
09EC 0	44100706		BSI	Ĺ	TYAVG	PRINT AVE COL TIME MSG	32F11510	
		*		_	: = ₹ 5 <u>:</u> .		32F11520	
	44000654		126	L	CNTRL	GD TO CNTRL RTN	32F11530	
09F1 0	0002	TWO	DC		2		32F11540	
		* *****	.	***	****	******	32F11550 32F11560	
		*				TUS MESSAGE	32F11570	
		*****	****	** *		******	32F11580	
							0000 10	0225. 2
DATE EC NC.	02JAN66 415490	01MAY		1 5N 4 196	0V66 643		PROG ID Page	032F-2 9
							. = =	

MAINTENANCE			

32F11590 THIS SUBROUTINE PRINTS ALL THE STATUS MESSAGES. THE MESSAGE NUMBER MUST BE SET 32F11600 32F11610 IN XRI AND THE ALPHA ADDRESS IN XR2 UPCN 32F11620 ENTRY. 32F11630 32F11640 32F11650 09F2 U 0000 TYPE SET MSG ND. 32F11660 09F3 0 6907 STX 1 SMSG 32F11670 STX 2 SMSG+3 SET ALPHA ADDRS 09F4 0 6A09 PRINT MSG 32F11680 I LOG 09F5 00 44800163 851 32F11690 C9F7 1 U9F8 DC SMSG 32F11700 RESET DATA CONTROL 32F11710 09F8 0 DUU4 SMSG+2 32F11720 BSC TYPE RETURN 09F9 01 4C8UU9F2 MSG NO.SET HERE 32F11730 SMSG 09FB 0 0000 DC 32F11740 09FC 0 000F DC /UUUF 32F11750 DC *-* 09FC 0 0000 ALPHA ACDRS SET HERE 32F11760 09FE 0 0000 *-* 32F11770 09FF 0 0000 DC /0000 32F11780 *-* MAX PUNCH DELAY 32F1,1790 0000 G 0000 MAXPD DC *-* COLUMN TIME AVERAGE 32F11800 CTAVG DC 0A01 0 0000 32F11810 PUNCH AVERAGE S/B 6000 0A02 0 1770 PAVG DC 32F11820 0A03 0 03E8 RAVG DC 1000 **READ AVERAGE S/B** 32F11830 32F11840 ******* 32F11850 ALPHA MESSAGES 32F11860 ********* 32F11870 32F11880 CARD NOT BLANK 32F11890 0AU4 0 1E3E ACNBK DC /1E3E 32F11900 /6232 DC 0A05.0 6232 32F11910 QAQ6 0 2176 DC 12176 32F11920 DC 0A07 0 529E /529E 0A08 0 211A /211A 32F11930 /5E3E 32F11940 0A09 0 5E3E 0A0A 0 765A DC /765A 32F11950 32F11960 CAOB O FFFF DC /FFFF 32F11970 32F11980 /923E WAS S/B 0A0C 0 923E AWAS DC 32F11990 0A0D 0 9A21 DC /9A21 CAOE 0 219A DC /219A 32F12000 DC /BCIA 32F12010 CAOF O BCIA 32F12020 OA10 0 FFFF D'C /FFFF 32F12030 32F12040 0A11 0 923E ADWAS DC /923E WAS S/B 0A12 0 9A21 /9A21 32F12050 DC /2121 32F12060 0A13 0 2121 /9ABC 32F12070 DC OA14 0 9ABC 32F12080 0A15 0 1A21 DC /1A21 32F12090 OA16 0 2121 DC /2121 OA17 0 FFFF DC /FFFF 32F12100 32F12110 /329A 32F12120 0A18 0 329A ADS W DC DSW 0A19 0 9221 DC /9221 32F12130 /FFFF 32F12140 OALA O FFFF DC 32F12150 OA18 0 2194 ASDSH DC /2184 -STATIC DSh ERR 32F12160 0A1C 0 9A9E /9A9E 32F12170 0A1D 0 3E9E DC /3E9E 32F12180 32F12190 OA1E 0 221E DL /221F DC OA1F 0 2132 /2132 32F12200 0A20 0 9A92 DC /9A92 32F12210 0A21 0 2136 /2136 32F12220 0A22 0 6262 DC 16262 32F12230 OA23 O FFFF DC /FFFF 32F12240 32F12250 ABD Six DC /2184 -BUSY DSW ERR 0A24 0 2184 32F12260

DATE 02JAN66 01MAY66 15N0V65 EC NO. 415490 4154906 419643

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PART ND. 2191228

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SY	YSTEM PART NO. 219	91228	IBM MAINTENANCE DIA	AGNOSTIC PRO	GRAM FOR THE 1	130 SYSTEM	PART NO. PAGE	2191228 10A
1442 TIMING TEST	27.	•	1442 TIMING TEST					
1772 111110 1231				in the second of				
OA25 O 1AB2 DC /1AB2 OA26 O 9AA6 DC /9AA6 OA27 O 2132 DC /2132 OA28 O 9A92 DC /9A92 OA29 O 2136 DC /2136 OA2A O 6262 DC /6262	32F12270 32F12280 32F12290 32F12300 32F12310 32F12320		OA6U O 761E OA61 O 2600 OA62 O FFFF OA63 O 1236 OA64 U 3632 OA65 O FFFF	DC DC DC AFD DC DC	/761E /2600 /FFFF /1236 /3632 /FFFF	FEED	32F12950 32F12960 32F12970 32F12980 32F12990 32F13000	
OA2B O FFFF	32F12330 32F12340 4 CSW ERR 32F12350 32F12360 32F12370 32F12380 32F12390 32F12400 32F12410 32F12420		0A66 0 7602 0A67 0 32A6 0A68 0 2184 0A69 0 5602 0A6A 0 369A 0A6B 0 9A21 0A6C 0 FCF0 0A6D 0 FODB 0A6E 0 219A	ANR DY DC	/7002 /32A6 /2184 /5662 /369A /9A21 /FCFO /FOD8 /219A	NRDY - PRESS 1442 START	32F13010 32F13020 32F13030 32F13040 32F13050 32F13060 32F13070 32F13080 32F13090 32F13100	
0A33 0 FFFF DC /FFFF 0A34 U 2176 ANINT DC /2176 ND IN 0A35 U 5221 DC /5221 UA36 0 2276 DC /2276 0A37 0 9E52 DC /9E62 0A38 0 569E DC /569E 0A39 U FFFF DC /FFFF	32F12430 NTRPT 32F12440 32F12450 32F12460 32F12470 32F12480 32F12490 32F12500		0A6F 0 9E3E 0A70 0 629E 0A71 0 FFFF 0A72 0 5E32 0A73 0 2100 0A74 0 1A5E 0A75 0 3E76	DC DC DC DC DC DC DC DC	/9E3E /629E /FFFF /5E32 /21U0 /1A5E /3E76	LOAD BLANKS	32F13110 32F13120 32F13130 32F13140 32F13150 32F13160 32F13170 32F13180	
OA3A O 2184 APCK DC /2194 PCH COA3B O 5632 DC /5682 OA3C O 761E DC /761E OA3D O 2621 DC /2621 OA3E O 1E5A DC /1E5A OA3F O FFFF DC /FFFF	32F12520 32F12530 32F12540 32F12550 32F12560 32F12570		0A76 0 5A9A 0A77 0 FFFF 0A78 0 5E3E 0A79 0 9A9E 0A7A 0 211E 0A7B 0 3E62 0A7C 0 3200	DC DC DC DC DC DC DC DC	/5A9A /FFFF /5E3E /9A9E /211E /3E62 /3200	LAST CARD	32F13190 32F13200 32F13210 32F13220 32F13230 32F13240 32F13250 32F13260	
0A41 U 3662 DC /3662 0A42 O 6221 DC /6221 0A43 U 1E5A DC /1E5A 0A44 O FFFF DC /FFFF 0A45 O 2134 ACCNT DC /2184 COL C	32F12590 32F12600 32F12610 32F12620 32F12630 CNT ER 32F12640		OATD O FFFF OATE O 923E OATF O 9A21 OA80 O 2121 OA81 O 723E	ATL DC DC DC DC DC DC	/FFFF /923E /9A21 /2121 /723E /9621	WAS MAX -CCL INTRPT SLOW	32F13270 32F13260 32F13290 32F13300 32F13310 32F13320 32F13330	
UA46 0 1E52 DC /1E52 UA47 0 5E21 DC /5E21 UA48 0 1E76 DC /1E76 UA49 0 9E21 DC /9E21 UA4A 0 3662 DC /3662 UA4B 0 FFFF DC /FFFF	32F12650 32F12660 32F12670 32F12680 32F12690 32F12700 32F12710		OA82 O 9621 OA83 O 2121 OA84 O 1E52 OA85 O 5E21 OA86 O 2184 OA87 O 2276 OA88 O 9E62	DC DC DC DC DC	/2121 /1E52 /5E21 /2184 /2276 /9E62		32F13340 32F13350 32F13360 32F13370 32F13380 32F13390	
0A4C 0 2121 ADATA DC /2121 CCL 0A4D 0 1E52 DC /1E52 0A4E 0 5E21 DC /5E21 0A4F 0 2121 DC /2121 0A50 0 2184 DC /2184 0A51 0 323E DC /323E 0A52 0 9E3E DC /9E3E 0A53 0 2136 DC /2136 0A54 0 6262 DC /6262 0A55 0 FFFF DC /FFFF	DATA ERR 32F12720 32F12730 32F12740 32F12750 32F12760 32F12770 32F12770 32F12780 32F12780 32F12800 32F12810		OA89 O 569E OA8A O 219A OA8B O 5E52 OA8C O 920O OA8C O FFFF CA8E O 923E OA8F O 9A21 OA9O O 2121 OA91 O 7222	DC	/569E /219A /5E52 /9200 /FFFF /923E /9A21 /2121 /7222	WAS MIN -CCL INTRPT FAST	32F13400 32F13410 32F13420 32F13430 32F13440 32F13450 32F13460 32F13470 32F13480 32F13490	
* 0A56 0 095E ALOP DC /095E LAST 0A57 0 3E9A DC /3E9A OA58 0 9E21 DC /9E21 OA59 0 5256 DC /5256 OA5A 0 8421 DC /8421 OA5B 0 FFFF DC /FFFF	32F12820 32F12830 32F12840 32F12850 32F12860 32F12870 32F12880 32F12890		0A92 0 7621 0A93 0 2121 0A94 0 1E52 0A95 0 5E21 0A96 0 2184 CA97 0 2276 CA98 0 9E62 0A99 0 569E	DC DC DC DC DC DC	/7621 /2121 /1E52 /5E21 /2134 /2276 /9E62 /569E		32F13500 32F13510 32F13520 32F13530 32F13540 32F13550 32F13560	
0A5C 0 6236 ARD DC /6236 READ 0A5D 0 3E32 DC /3E32 OA5E 0 FFFF DC /FFFF 0A5F 0 5632 APCH DC /56B2 PUNCH	32F12910 32F12920 32F12930 32F12940		0A9A 0 2112 0A9B 0 3E9A 0A9C 0 9EUU CA9C 0 FFFF	DC DC DC	/2112 /3E9A /9E00 /FFFF		32F13580 32F13590 32F13600 32F13610 32F13620	0125 2
DATE 02JAN66 01MAY66 15NUV66 EC NG. 415490 4154908 419643	PROG ID O	32F-2 10	DATE 02JAN66 EC NO. 415490	415490B	15NOV65 419643 PEA 1335429	in the second of	PROG ID PAGE	032F-2 10A

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 S	SYSTEM PART NO. 2191228 PAGE 11	• 1	IBM MAINTENANCE DIAGNOSTIC PRO	GGRAM FOR THE 1130 SYSTEM	PART NO. 2191228 PAGE 11A
1442 TIMING TEST		• :	1442 TIMING TEST	कार्यक्ष । संदेशका १ वर्ष कार्यक्ष । संदेशका स्वरंग	State of the State
QA9F 0 B616 DC /B616 QAA0 0 211E DC /211E QAA1 0 525E DC /525E QAA2 0 2122 DC /2122 QAA3 0 769E DC /769E QAA4 0 6256 DC /6256 QAA5 0 9E21 DC /9E21 QAA6 0 9E22 DC /9E22 QAA7 0 7236 DC /7236 QAA8 0 FFFF DC /FFFF	COL INTRPT TIME 32F13640 32F13650 32F13660 32F13670 32F13680 32F13700 32F13710 32F13710 32F13720 32F13720 32F13750 32F13740 32F13760 32F13770 32F13770 32F13780 32F13780 32F13780 32F13810 32F13820 32F13830 32F13840		CAD9 U 0600 DC OADA O 0900 DC CADB O 1080 DC OADC O 2040 DC OADC O 2040 DC OADE O 8010 DC OADE O 8830 DC OAE1 U CCCO DC OAE2 O EEEU DC OAE3 O FFFO DC OAE4 O 7770 DC OAE5 O 3330 DC OAE6 O 1110 DC OAE7 O FFFO DC OAE8 O A000 DC OAE8 O A000 DC OAE8 O 8800 DC OAEA O 8800 DC OAEC O 8200 DC OAEC O 8200 DC OAEE O 8100 DC OAEE O 8080 DC	/0600 /0900 /1080 /2040 /4020 /8010 /FFF0 /8880 /CCCO /EEE0 /FFF0 /7770 /3330 /1110 /FFF0 COL 21 /A000 /9000 ALPHA RIPPLE /8800 /8200 COL 26 /8100 /8080	32F14310 32F14320 32F14330 32F14340 32F14350 32F14370 32F14380 32F14390 32F14400 32F14410 32F14440 32F14440 32F14460 32F14460 32F14460 32F14460 32F14470 32F14480 32F14490 32F144500 32F14500 32F14500 32F14500
OAB2 O 5E32 ALPC DC /5E32 LD P OAB3 O 2156 DC /2156 OAB4 O 1E26 DC /1E26 OAB5 O 3632 DC /3632 OAB6 O 211E DC /211E OAB7 O 3E62 DC /3E62 OAB8 O 329A DC /329A OAB9 O FFFF DC /FFFF	PCHEC CARDS 32F13850 32F13860 32F13870 32F13880 32F13890 32F13900 32F13910 32F13920 32F13920 32F13930		OAFF 0 8040 DC OAF0 0 8020 DC OAF1 0 8010 DC OAF2 0 5000 DC OAF3 0 4800 DC OAF5 0 420U DC OAF6 0 4100 DC OAF7 U 4280 DC	/8040 /8020 /8010 /5000 /4800 /4400 /4200 /4100 /4080	32F14530 32F14540 32F14550 32F14560 32F14570 32F14580 32F14590 32F14600 32F14610
OAB6 O 761E DC /761E OABC O 2621 DC /2621 OAP7 O 3236 DC /3236 OABE O 5E3E DC /5E3E OABF O A621 DC /A621 OAC0 U 8421 DC /8421 OAC1 O 0000 ADFCT DC *-* DELA OAC2 O FFFF DC /FFFF OAC3 O C400 DC /C400 O OAC4 O FC00 DC /FC00 1 OAC5 O D800 DC /DC00 3 OAC6 O DC00 DC /DC00 3 OAC7 O F000 DC /F000 4 OAC8 O F400 DC /F400 5	CH DELAY - X 32F13940 32F13950 32F13960 32F13970 32F13980 32F13990 32F14000 AY FACTOR 32F14010 32F14020 32F14030 32F14040 32F14050 32F14060 32F14070 32F14070 32F14080 32F14090		OAF8 0 4040 DC OAF9 0 4020 DC OAFA 0 4010 DC OAFA 0 3000 DC OAFC 0 2800 DC OAFC 0 2200 DC OAFF 0 2100 DC OAFF 0 2100 DC OBO0 0 2080 DC OBO1 0 2040 DC OBO3 0 2010 DC OBO4 0 0000 DC OBO5 0 FCO0 DC OBO6 0 O3FO DC	/4040 /4020 /4010	32F14620 32F14630 32F14640 32F14650 32F14660 32F14670 32F14680 32F14700 32F14710 32F14720 32F14730 32F14740 32F14750 32F147760 32F147760
OAC9 0 D000	32F14100 32F14110 32F14120 32F14130 32F14140 32F14150 32F14160 32F14170 32F14180 32F14190 32F14200		0808 0 03F0 DC 0809 0 0000 DC 080A 0 8880 DC 080B 0 4440 DC 080C 0 2220 DC 080E 0 1110 DC 080E 0 0000 DC 080F U 8880 DC 0810 0 CCC0 DC 0811 0 AAA0 DC 0812 0 9990 DC 0813 0 4440 DC 0814 0 6660 DC 0815 0 5550 DC	/03F0 /0000 /8880 /4440 /2220 /1110 /0000 /8880 /CCCO /AAAO /9990 /4440 /6660 /5550	32F14780 32F14790 32F14800 32F14810 32F14820 32F14830 32F14840 32F14850 32F14860 32F14860 32F14860 32F14690 32F14690 32F14910
	32F14240 32F14250 32F14260 32F14270 32F14280 32F14290 32F14300	• • • • • • • • • • • • • • • • • • •	0816 0 2220 DC 0817 0 3336 DC 0818 0 1110 DC 0819 0 0000 DC 081A 0 0000 DC 081B 0 FFFO DC 081C 0 FFFO DC	/2220 /3330 /1110 /0000 /0000 /FFF0 /FFF0	32F14920 32F14930 32F14940 32F14950 32F14960 32F14970 32F14980

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EC NO.

1442 TIMING TEST

1442 TIMING TEST

0B1D U	FFFO		DC	/FFF0		٠.	32F14990
081E U	FFFO	*	DC	/FFF0			32F15000
0B1F 0	FFFO		DC	/FFF0			32F15010
6320 0	FFFO		DC	/FFFO			32F15020
0B21 0	FFFU		DC	/FFF0			32F15030
0822 0	0000		DC	/0000	COLUMN 80	1.	32F15040
0823	0051		BSS	81			32F15050
		* ' '			Programme and the second		32F15060
		****	*****	*****	******		32F15070
		*	4	STORAGE 3	UFFERS		32F15080
		****	******	******	*******		32F15090
		*					32F15100
0874	0053	RTEL	BSS	83	READ BUFFER		32F15110
	0033					4 .	32F15120
OBC 7	0052	TIME	BSS -	82	INTERRUPT TIME BUFFER	*	32F15130
0019 0	FFFF		DC	/FFFF			32F15140
UCIA	05E8		END	BG1N			32F15150

CROSS REFERENCE LISTING SYMBOL VALUE ABDSm UA24 ACCNT 0A45 08DD 08CE ACNBK 0A04 ACOLT 0A9E 07CC ADATA UA4C 08DF ADFCT OACI 0683,06B5 ADSW 0804 0A16 OA2C 08D7 ADSW4 ADWAS 0411 O BDC AECK 0440 08DB **UA63** 0906 ALCE 0A78 09DC AL DBK 0687,0722,0741 0A72 0A56 0902 ALPC OAB2 06EB AMOD OAA9 05FF ANINT 0A34 08D5 0901 ANREY 0A66 APCH UA5F 0770 APCK OA3A 0809 APDLY DABA 06BE ARD OA5C 0787 ASDSh OA18 08D1 ATL 08E-0 UA7E UASE ATS 08E 2 07E6,07F6 AVG 0810 AVGCT 0814 068E, 06F2, 07B4, 07B8, 07C8, 07D4 06D0, U6D2, 08D6, 08D8, 08DA, 08DE AWAS OAUC BCNT 0905 09C3, 09CD BDSW U84A, 0923, 0930, 0931, 094A, 094B 08E8 0000.U5E8 EEGIN 0160 **U5E8** OC 1A BGIN .0904 BOX 09C2 BOX 1 09C4 09CF B0 X 2 09CA **09C4** CKBLK 0707 06AA,0748,07E3,0836 CKBU1 07DD 07E2 U5F 9, C6 37, O64 8, O64A, O6E8, O73E, O75 D, U944, O9E7, O9EF CNTRL 0654 CN10 0658 CN20 0662 065B CN30 0669 06FF,070A,C79B,079D COL 0918 070C, G753, 079F, 07DB, G7EF, 0808, 091C, 091E, 0953, 0954, COLCT 09UC 0988 0766,09AD,09AE COLPC 0960 COLRD 095E 0871,0873,099D COMPR 06CB, 0710, C797, 07C2-07C4 0796 COMP1 0786.078A 079A COMP2 07AF 0 8CB 07A1 COMP3 **078B** CTAVG OAO1 07C 9 090E 0703,088C,088E DATA 062A, 06B7 0625, 09A6, 09AB DINCR 06E5 09A8 DLPCH 084C,0861,0877,0935,098B Ú90A 085B,085D,085F,094E,0957,0995 DSW4 08EA EMSG 0905 U8ED, 08EE, 08EF, 08FC 0000,0000,0000,0667 END 0164 0683 06D4,0717 ENDPD 0825 ERLCK 0166 ERROR 0162 0000,08F6,08FA ERRO 082C 07DF ERR1 0838 0847,0900 083B ERR 1 A 0844 07A7 ERR 10 **6880**

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0832,0842,0852,0869,087C,0881,0888,089C,08C5,08FF,

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1442 TIMING TEST

14.1	PAVG	UAU2	0643,0734
	PCCGL	09A3	0984
71	PCH	USAD	0978, 0947
	PCMAX	0912	063D, 06CD
	PCMIN	0913	O6CE
4.	PLIATA	OAD3	0694,0698,069A,069E,06E3,06F4,0757
	PDBAS	06E6	062E, 06BA
	PDLAY	OoEl	0691,06A6,C6AC,06BC,06B8,06DD,0727,0746,09A3
	PDMAX	06E4	0621, 3690
	PDWAS	06E2	0692, 06AD, 06B2
	PID	05DC	. 05EA
1,	PONLY	U683	05ED, 0636, 06A7, 06E7, 073C
	PTERM	0764	0769,0770,0780
	PUNCH	û 76 5	06C9,0730,073A,0750,0782
	P6AVG	0680	0642
	P6TM	067C	063C
	RAD	050E	066D
	RAVG	0A03	0646, 074A
	RDATA		095E • 099E
	RDCOL	0990	0975,0987
	RDMAX	0914	0540,0712
	RDMIN	0915	0713
	READ	0784	06F7, 0752, 0793, 0795, 07DA
	READY	0988	076E, 0785, 09BD, 09CB
	RID	050D	05EC, C658, 0660, 0662, 0664, 0669, 0942, 09E4 065A
	RIDCK	0675	
	RPS W RQK B	08E6 01B C	0774,078C,086D,08AA,08B7 0000
	ROTY	013E	0000
	RTBL	0B74	0705,072A,072E,0755,07DD,099F
	RTNOM	0676	0666
	RTNSH	0165	0671
	RTRN	0949	0997
	RTTBL	0677	0568,0675,0676
	RX1	089D	0890
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	SNCGM	096B	0994
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	SPD1	0972	061A
	SPD2	097C	061E
	SPD3	09B5	0627
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TYPE	U9F 2	0601,0689,06C3,06ED,0724,0743,07D0,09C3,09DE,09F9
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T011	0693	069D
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16M MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM 2501 READER/1442 HOD 5 PUNCH FUNCTION TEST

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3. OPERATING PROCEDURE

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3.1*** PROGRAM LOADING

STANDARD MONITOR LOADING PROCEDURES APPLY THESE PROCEDURES ARE SUMMARIZED HERE. SEE DM USE PROCEDURE FOR DETAILS.

1. SET FIRST TYPEWRITER TAB 20 CHARACTERS FROM LEFT MARGIN. 2. SET BIT SWITCH 15 OFF - LOAD AND GO ON - TO SPECIFY OPTIONS BEFORE RUNNING.

> IF HALT AFTER LOADING, SELECT PROGRAM OPTIONS THEN TURN DEF HALT SWITCH OR FOLLOW NORMAL RESTART PROCEDURE (SECTION

- 3. LOAD DIAGNOSTIC MONITOR AND THIS PROGRAM.
- 4. SELECT PROGRAM OPTIONS, IF DESIRED.

3.2*** PROGRAM OPERATION.

THESE OPERATING PROCEDURES APPLY TO SINGLE PROGRAM OPERATION DALY. FOR OVERLAP OPERATION, REFER TO SECTION 3.2.3 OF THE 1130 DIAGNOSTIC MONITOR II DOCUMENTATION.

TO RUN 1442 IN OVERLAP WITH THE 2501, USE 1442 TIMING TEST. THE 2501/1442 TEST MUST BE LOADED FIRST. SELECT THE DESIRED 2501 ROUTINE BEFORE STARTING THE 1442. ROUTINES IN THIS TEST WILL NOT OPERATE PROPERLY.

TIMING FROM 1442 TIMING TEST WILL NOT BE ACCURATE WHEN THE TEST IS OVERLAPPED.

3.2.1 PROGRAM CONTROL - FUNCTION 0

1. SET SWITCHES 0-7 TO 01. 2. SET SWITCHES 8-15 AS DESIRED.

FUNCTION	
RESTART	
ROUTINE START MESSAGE	
LOCK ON FUNCTION	
LOOP PROGRAM	
LOOP ON ERROR	
BYPASS ERROR PRINTOUT	
HALT ON ERROR	
HALT	
	RESTART ROUTINE START MESSAGE LOCK ON FUNCTION LOOP PROGRAM LOOP ON ERROR BYPASS ERROR PRINTOUT HALT ON ERROR

3. PRESS INT REQ KEY ON CONSOLE.

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,如果这种大型整个的时候,但这种要不够完全,一个就是这些重新,一样也不是这种,可是这种,而且这个

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PART NO. 2243552 IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PAGE 0003 2501 READER/1442 MOD 5 PUNCH FUNCTION TEST 3/5*** RESTART 1. SET SWITCHES 0-7 TO 01.
2. TURN ON SWITCH 8.
3. SET DESIRED CONTROL IN SWITCHES 9-14. 4. PRESS INTERRUPT REQUEST KEY. ******* DATE 15APR67 15JUN67

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	IBM MAINTE	NANCE DIAGNOSTIC	C PROGRAM FOR THE 1130 SYSTEM	PART NO. Page	2243552 0003A
	2501 READE		NCH FUNCTION TEST	7A0E	
	4. PRINTO	UTS		•	
	ALL PR	INTOUTS ARE IN	THE STANDARD FORMAT.		
	APPNN OORR		(MESSAGE)		
	OR Eppnn dorr	AAAA	(MESSAGE)		
		E	IDENTIFIES STATUS MESSAGES IDENTIFIES ERROR MESSAGES IS THE PID OF THE PROGRAM CAUSING THE	E MESSAGE	
			THIS WILL BE EITHER OD FOR MESSAGES ORIGINATED BY THE MONITOR OR OE FOR MESSAGES ORIGINATED BY THIS PROGRAM.	1442 1146	
		RR AAAA Message	IS THE MESSAGE SEQUENCE NUMBER IS THE ROUTINE NUMBER IS THE ADDRESS OF THE ROUTINE IS ANY VARIABLE INFORMATION IS THE MACHINE TYPE		
	4-1***	STATUS MESSAGE		·	
	A0000	er e	NUM PID ADRS RELF LD		
		(EXCEPT MONITO	S PRINTED FOLLOWING THE LOADING OF AN R), THE MESSAGE GIVES THE LOAD SEQUEN, THE ADDRESS INTO WHICH THE PROGRAM TION FACTOR.	CE NUMBER,	
	A0001		SHS PID	en e	
		BY THE MONITOR TOGETHER WITH CONTENTS OF SW	S PRINTED EACH TIME A VALID SWITCH EN THE MESSAGE CONTAINS THE SWITCH SE THE PROGRAM ID OF THE PROGRAM INTO WH ITCHES 8-15 WERE STORED. IF THE SWIT- T OF ANY PROGRAM THE WORD HALT WILL F	TTING READ ICH THE CH ENTRY	
	AOEOO OOOR				
		40	MESSAGE - IF SWITCH 9. FUNCTION 0. IS	TURNED ON.	
		THIS MESSAGE W	ILL BE PRINTED BEFORE THE START OF EAR OF THE NEXT ROUTINE AND AAAA IS THE	CH ROUTINE.	
	AOEO1 OORR	AAA	LOAD AND MAKE RDY		
1. s		-	S PRINTED WHEN THE PROGRAM IS INITIAL PROPER CARDS IN THESE START.		
	AOEO2 DORR	AAAA	NRDY MMM		
		INITIATING AN	WAITING FOR READY ON A MACHINE BEFOR OPERATION. PRESS START. IF THE MESS	AGE	•
		PERSISTS EVEN	THOUGH THE READY LIGHT ON THE DEVICE BIT (15) IN THE DSW IS PROBABLY STAY!	15 OM,	

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2501 READER/1442 MOD 5 PUNCH FUNCTION TEST

AOEO3 DORR AAAA LAST CARD

THE LAST CARD BIT WAS ON THE DSW SENSED ON THE LAST OP COMPLETE INTERRUPT. THIS SHOULD OCCUR ONLY ON THE OPERATION AFTER THE START KEY WAS DEPRESSED WITH THE HOPPER EMPTY AND A CARD IN THE PREREAD STATION. IF THIS MESSAGE OCCURS AT ANY OTHER TIME, CHECK PROPER OPERATION OF DSW BIT 3.

ACEC4 COC6 AAAA

SET PATT IN SW 0-11 THEN TN SW 12.

THIS MESSAGE FROM ROUTINE 6, "PUNCH SELECTED PATTERN" CALLS FOR THE OPERATOR TO SET THE DESIRED PATTERN IN THE SWITCHES. SWITCHES 0-11 REPRESENT PUNCH ROWS 12-9 RESPECTIVELY. WHEN THE SETTING IS COMPLETE, TURN ON SWITCH 12 TO SIGNAL THE PROGRAM. PUNCHING WILL THEN START. IF THE SWITCH SETTING IS CHANGED, THE PATTERN WILL CHANGE SO LONG AS SWITCH 12 IS ON. IF SWITCH 12 IS TURNED OFF, AND THE PATTERN CHANGED, PUNCHING WILL STOP UNTIL SWITCH 12 IS AGAIN TURNED ON.

A0E05 0007 AAAA

SET PATT IN SW 0-11 THEN TN SW 12

THIS MESSAGE FROM ROUTINE 7, "READ SELECTED PATTERN" CALLS FOR THE OPERATOR TO SET THE PATTERN OF THE DECK HE INTENDS TO USE INTO THE BIT SWITCHES. SWITCHES 0-11 REPRESENT ROWS 12-9 RESPECITIVELY. WHEN THE SETTING IS COMPLETE, TURN ON SWITCH 12 TO SIGNAL THE PROGRAM. THE PROGRAM WILL READ CARDS, COMPARING THE DATA READ TO THE BIT SWITCH SETTING. NO PROVISION IS MADE FOR CHANGING THE SWITCHES EXCEPT AT THE BEGINNING OF ROUTINE 7.

4.2*** ERROR MESSAGES

THE DSW IS CHECKED FOR ABSOLUTE CORRECTNESS AT ALL TIMES. IF AN ERROR IS DETECTED ONE OF THE MESSAGES BELOW WILL INDICATE THE PROBLEM. IT IS LEFT TO THE OPERATOR TO ANALYZE THE DSW FOR THE SPECIFIC PROBLEM AREA.

*		THE 2501/1442 DSW
*		
*	BIT	
*	0	READ COLUMN (1442)
*	1	PUNCH COLUMN (1442)
*	2	ERROR
*	3	LAST CARD
*	4	OPERATION COMPLETE
*	5	NOT USED
*	6	NOT USED
*	7	NOT USED
*	8	NOT USED
*	9	NOT USED
*	10	NOT USED
*	11	NOT USED
*	12	NOT USED
*	13	NOT USED
*	14	BUSY
* *	15	BUSY OR NOT READY

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) IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PART NO.) PAGE 2501 READER/1442 MOD 5 PUNCH FUNCTION TEST))) \mathcal{D} F0001 SWS INVLD XXXX) THE SETTING OF SWITCHES 4-7 DID NOT EQUAL THE LOAD SEQUENCE NUMBER OF ANY PROGRAM IN CORE. 7 E0003 OVR CORE THE PROGRAM WHICH THE LOADER WAS ATTEMPTING TO LOAD 7) EXCEEDED AVAILABLE CORE. LOADING WAS TERMINATED. E0004 CKSUM -1 A CHECK SUM ERROR WAS DETECTED WHILE LOADING A TEST PROGRAM. THIS ERROR OCCURS UNDER ANY OF THE FOLLOWING CONDITIONS.) 1. A CARD IS MISSING OR IS OUT OF SEQUENCE. THERE IS AN EXTRA CARD IN THE DECK. THE PUNCHED INFORMATION ON THE CARD IS NOT CORRECT. `` 4. DATA WAS LOST OR PICKED UP DUE TO A MACHINE MALFUNCTION. DUE TO A CPU MALFUNCTION, THE CHECK SUM WAS NOT CORRECTLY CALCULATED. WHEN THIS ERROR OCCURS ATTEMPT TO RELOAD THE PROGRAM. E0005 OOON XXXX THIS ERROR WILL OCCUR IS AN INTERRUPT OCCURS, BUT THE ILSM WAS NOT CORRECT. N IS THE INTERRUPT LEVEL AND XXXX IS THE ILSW. THIS PRINTOUT WILL ONLY OCCUR IF THE INTERRUPT IS RESET BY A BOSI. NO ATTEMPT IS MADE BY THE ERROR ROUTINE TO RESET THE REQUEST BIT. WAS S/B DSW ERR LEVEL 4 EOEO1 OORR AAAA) DDDD DDDD MMMM AN UNEXPECTED CONDITION HAS BEEN DETECTED IN THE DSW FOR • MACHINE (MMMM) ON INTERRUPT LEVEL 4. DATA MODIFIERS (DDDD) SHOW THE DETECTED DSW. AND WHAT IT SHOULD BE. IN HEX. 3 EOEO2 OORR AAAA WAS S/B DSW ERR LEVEL O DDDD DDDD MMMM) 3 SAME AS EGEO1 EXCEPT FOR LEVEL O EOEO3 OORR AAAA NO INTRPT J MMMM AN OPERATION WAS STARTED ON THE MACHINE (MMMM) AND 7 1 NO OP COMPLETE INTERRUPT WAS RECEIVED DURING A 15 SECOND TIMEOUT. THE ROUTINE RR WILL BE STARTED AGAIN FROM THE BEGINNING. THIS MESSAGE INDICATES A FAILURE OF EITHER THE 1 INTERRUPT GENERATION CIRCUITS OR THE READY CIRCUITS. EGET DORR AAAA WAS S/B DSW ERR INITIALIZING 7 4444 4444 MMMM THE DSW FROM MACHINE (MMMM) WAS RESET, THEN SENSED BEFORE 1 3 ANY OPERATION WAS STARTED IN ROUTINE (RR), AND AN UNEXPECTED CONDITION WAS PRESENT. DATA MODIFIERS (DDDD) SHOW THE DETECTED DSW. AND WHAT IT SHOULD BE IN HEX. THE PROGRAM WILL REPEAT THE RESET AND SENSE DSW OPERATION CONTINUOUSLY, AND RETYPE THE MESSAGE EVERY 15 SECONDS. NO OPERATION WILL BE STARTED UNTIL THE INITIAL DSW IS CORRECT. 3 DATE 15APR67 15JUN67 PROG ID EC NO. 419605 420317 PAGE) 7) . 7

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2501 READER/1442 MOD 5 PUNCH FUNCTION TEST

EGEOS DORR AAAA

WAS S/B COL COUNT ERR. DDDDD DDDDD 1442

AFTER PUNCHING A CARD, A COMPARISON WAS MADE OF THE ADDRESSES OF THE PUNCH TERMINATOR AND THE LAST COLUMN PUNCHED. THE DATA MODIFIERS (DDDD) SHOW THE NUMBER OF COLUMNS PUNCHED, AND THE NUMBER WHICH SHOULD HAVE PUNCHED. IN DECIMAL. A PUNCH CHECK WILL NORMALLY PRODUCE THIS ERROR, SINCE PUNCHING IS STOPPED AT THE COLUMN WHICH YIELDS THE CHECK.

EDEO7 DORR AAAA

WAS S/B COL COUNT ERR DDDDD DDDDD 2501

AFTER READING A CARD, THE READ AREA IS CHECKED FOR THE PROPER NUMBER OF CHARACTERS. THE DATA MODIFIERS (DDDDD) SHOW THE NUMBER READ, AND THE NUMBER EXPECTED. THIS MESSAGE COULD BE CAUSED BY FAILURES OF THE CR WORD COUNT REGISTER, CYCLE STEAL CIRCUITRY, OR THE CR ADDRESS REGISTER.

EDEOB OORR AAAA

2. 5 OR 7.

WAS S/B COL DATA ERR DDDD DDDD DDDDD AFTER READING A CARD, THE DATA READ DOES NOT EQUAL THE DATA EXPECTED. THE DATA MODIFIERS (DDDD) SHOW THE DATA READ, AND THE DATA EXPECTED IN HEX. AND THE COLUMN NUMBER IN DECIMAL. THIS ERROR CAN COME FROM ROUTINES

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5. COMMENTS

5.1*** ROUTINE DESCRIPTIONS

THERE ARE TEN TEST ROUTINES IN THE 2501/1442 FUNCTION TEST. THE FIRST THREE ARE "NORMAL ROUTINES", IE THEY ARE RUN WHEN NO ROUTINE SELECTION IS MADE, AND CONSTITUTE A COMPLETE FUNCTIONAL CHECK OF THE 2501 AND 1442. ROUTINES 4. 5. 6. 7 AND A RUN ONLY IF SELECTED, AND PROVIDE A MEANS OF EXERCISING CERTAIN FUNCTIONS, AND/OR BIT LINES. ROUTINES 8 AND 9 ARE UTILITY ROUTINES. ALL OF THE TEST ROUTINES FOLLOW THE SAME GENERAL ORGANIZATION UTILIZING THE SERVICE SUBROUTINES.

GENERAL ORGANIZATION OF TEST ROUTINES

- 1. INITIALIZE THE DEVICE (INPCH. INROR).
- 2. SET UP DATA FOR PUNCHING OR COMPARE. 3. CHECK STATUS. (CHK14, CHK25).
- INITIATE I/O OPERATION (PNCH. RDACD)
- 5. CHECK DATA.
- SET UP DATA FOR NEXT OPERATION.
- 7. RETURN TO (3). CHECK STATUS.

5.1.1 OPERATION OF NORMAL ROUTINES

A. ROUTINE 1---- PUNCH ROTATING PATTERN.

THIS ROUTINE PUNCHES A ROTATING PATTERN IN 80 COLUMNS. THE PATTERN REMAINS FIXED IN STORAGE AND THE BEGINNING ADDRESS IS INCREMENTED THRU THE FIRST 79 POSITIONS OF THE 160 WORD FIELD. THE ADDRESS IS THEN RE-INITIALIZED. AND THE PROCESS REPEATED.

B. ROUTINE 2---- READ ROTATING PATTERN.

THIS ROUTINE READS THE DECK PUNCHED BY ROUTINE ONE. DATA IS COMPARED IN THE SAME MANNER AS IT WAS PUNCHED.

C. ROUTINE 3---- READ COLUMN COUNT CONTROL

THIS ROUTINE READS CARDS, VARYING THE WORD COUNT FROM 1 TO 80. THE LENGTH CHECK IS PERFORMED BY THE RDACD SERVICE SUBROUT INE.

D. ROUTINE 4---- GANG PUNCH.

THIS ROUTINE READS ONE CARD IN THE 2501 AND PUNCHES THAT DATA CONTINOUSLY ON THE 1442. THIS ALLOWS PUNCHING ANY PATTERN FOR ADJUSTMENT OR SCOPING PURPOSES.

E. ROUTINE 5---- READ GANG PUNCHED DECK.

THIS ROUTINE READS THE FIRST CARD INTO A COMPARE AREA. AND READS THE REMAINING CARDS INTO THIS READ AREA, COMPARING THE DATA TO THAT FROM THE FIRST CARD. THIS ALLOWS READING ANY PATTERN FOR ADJUSTMENT OR SCOPING PURPOSES.

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"才最高,就都这种老年轻要感觉的,但这种的转换的。其实"实现的实验"会到"更变进"。此样还"这个意识"还是这事的。

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2501 READER/1442 MOD 5 PUNCH FUNCTION TEST

5.3*** MACHINE DISCOVERED ERRORS

THE FOLLOWING ARE EXAMPLES OF WHAT MESSAGES TO EXPECT FOR CERTAIN MACHINE CHECKS. THE LIST IS NOT COMPLETE BUT IS SUPPLIED TO FAMILIARIZE THE USER WITH THE ERROR CHECKING PHILOSOPHY.

1. READ CHECK WHILE RUNNING ROUTINE 2

E0E01 0002 04EA

WAS S/B DSW ERR LEVEL 4

2801 0801 2501

(THE DSW SHOWS AN ERROR BIT)

E0E08 0002 06EA

WAS S/B COL DATA ERR 4020 4060 00010

(THE DATA DID NOT COMPARE BECAUSE A SEVEN PUNCH WAS DROPPED IN COL 10. THIS MAY NOT OCCUR ON A READ CHECK.)

A0E02 0002 06EA

NRDY 2501

(THE MACHINE WENT NOT READY WITH THE READ CHECK

- 2. A FEED CHECK HOULD YIELD A DSW ERROR AND NOT READY IN SIMILAR
- 3. PUNCH ECHO CHECK WHILE RUNNING ROUTINE 4

E0E02 0004

WAS S/B DSW ERR LEVEL O

6003 4003 1442 (THE LEVEL O DSW SHOWS THE ERROR BIT)

E0E01 0004 0739

WAS S/B DSW ERR LEVEL 4

2801 00080 1442

(SO DOES THE LEVEL 4 DSW)

E0E06 0004 0739

WAS S/B COL COUNT ERR

00056 00080 1442 (THE ERROR OCCURRED IN COL 56. TERMINATING THE PUNCHING.)

A0E02 0004 0739

(READY DROPPED DUE TO THE PUNCH CHECK)

4. FEED CHECK ON 1442 WOULD YIELD DSW ERRORS AND NOT READY IN SIMILAR FASHION.

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2501 READER/1442 MOD 5 PUNCH FUNCTION TEST

5.4*** ERROR CHECKING BY ROUTINE

EACH ROUTINE OR SUBROUTINE WILL PRODUCE ITS OWN ERROR MESSAGE. SINCE EACH OF THE SERVICE SUBROUTINES SERVICE SEVERAL TEST ROUTINES. THEIR MESSAGES MAY OCCUR IN ANY TEST ROUTINE. THE FOLLOWING IS A LIST OF THE ERROR MESSAGES. AND ITS SOURCE.

E0E02

- - - MESSAGES ROUTINE/SUBROUTINE DSW ANALYSIS (DSWAN) - - - E0E01

WAIT FOR INTERRUPT (WAIT) - - - E0E03

INITIALIZATION (INPCH, INRDR) - - E0E05

PUNCH A CARD (PNCH) - - - E0E06

READ A CARD (RDACD) - - - E0E07

ROUTINES 2, 5, 7 - - - E0E08 MONITOR

E0002 E0003 E0005 E0004

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5.4 EXAMPLE OF ROTATE CARD DECK

******* 1111111 1 1 1111 1 111111111

****** **********

CARD 3 1 1 1111 1

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2501/1442 MOD 5	FUNCTION TEST	·

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM 2501/1442 MOD 5 FUNCTION TEST

PART MO. 2243550 PAGE 1A

					2050000	5 8 8 8
	*****	*******		************	30E00000	
			EQUATE TA	DLC:***************	30E00010 30E00020	
	*				30E0002 0	
		TO THE	D FOLLIVALE	NT DIAGNUSTIC MONITOR	30E00040	
		ADDRESS		TO DEPONDED TO THE PERSON	30E00059	
	*	AUDICESS			30E00060	
	\$				30E00070	
	•	MONITOR	ENTRY ADD	RESSES	30E00080	•
•	*				30E00090	
0160	BEGIN	EQU	/0160	BEGIN ROUTINE SUPERVISOR ROUTINE ERROR LOG ROUTINE	30EC0100	•
0161	START	FΩII	BEGIN+1	SUPERVISOR ROUTINE	30E00110	
0162	ERROR	EQU	START+1	ERROR LOG ROUTINE	30E00120	
0163	LOG	EQU .	ERROR+1	ERROR LOG ROUTINE STATUS LOG ROUTINE	30E00130	
0164	END	EQU	LOG+1	END ROUTINE	30E00140	
The second of the second of the	*		_n v		30E00150	
	*				30E00160	
	*			URD ADDRESSES	30E00170	
1 mg .	*		END+1	DOUTTAGE CTART CH	30E00180	•
0165	KINSH	EQU	END+1	ROUTINE START SW LOCK ON ERROR CONTROL	30E00190	
0166	EKECK	EOU	END+2	I/O BUSY SW ADDRS	30E00200 30E00210	
0167 0168	FORDI	EQU.	END+2 END+3 END+4	RELOCATION FACTOR ADDRS	30E00210	
0100	*	EAO	ENUTY	RELOCATION FACTOR ADDRES	30E00230	
	*				30E00240	
	*	INTERRI	PT TRANSFE	R VECTOR ADDRESSES	30E00250	
	*				30E00260	
017A		EQU	/017A	INTERRUPT LEVEL ZERO	30E00270	
	ILI	EQU	IL0+16 IL1+16	INTERRUPT LEVEL ONE	30E00280	
019A	IL2	EQU	111+16	INTERRUPT LEVEL TWO	30E00290	
Olaa	IL3	EQU	IL2+16	INTERRUPT LEVEL THREE	30E00300	
01BA	114	FOII.	IL3+16	INTERRUPT LEVEL FOUR	30E00310	
0188	RQTY	EQU	1L4+1	CONSOLE PRINTER REQUEST	30E00320	
01BC	KUND	EAO	RQTY+1	USE KEYBOARD REQUEST	30E00330	
01BD	SVKB	EQU	RQKB+1	INTERRUPT LEVEL THREE INTERRUPT LEVEL FOUR CONSOLE PRINTER REQUEST USE KEYBOARD REQUEST KB SERVICE REQUEST	30E00340	
	*			And the second s	30E00350	
	****			*************	30E00360	
0000	•	ORG	*+/05DC	<u> </u>	30E00370	
	*	THE MOS	ITOD USSS	CORE LOCATIONS 0-05DC.	30E00380 30E00390	
		FOR COM	ITENTS OF T	HESE ADDRESSES REFER	30E00400	•
				MONITOR LISTING.	30E00410	
	*				30E00420	
	*				30E00430	
	****	******	********	******	30E00440	
			PROGRAM C	ONTROL TABLE	30E00450	
	****	*****		******	30E00460	
	•		2.7		30E00470	es.
05DC 0 030E	PID		/030E		30E00480	
05DD • 0000	RID	DC	/0000	ROUTINE ID	30E00490	•
05DE 0 0000	RAD	DC DC	/000 C	ROUTINE ADDRS	30E00500	
05DF 0 0000	SWO	DC	/0000	PROGRAM CONTROL	30E00510	
05E0 0 0000	SWI	DC	/000 0	ROUTINE SELECTION	30E00520	
05E1 0 0000 05E2 0 0000	SM2	DC DC	/0000	we en	30E00530 30E00540	
05E3 1 05EB	SW3	DC	/0000 STRT	LOOP ADDRESS	30E00550	
05E4 1 05EB		DC	STRT	RESTART ADDRESS	30E00560	
05E5 1 05EB	MLSCF		STRT	ENTRY SET IN MAINLINE	30E00570	
05E6 G 0000		DC	/0000	IN INTERRUPT	30E00580	
OSET O FFFF		DC	/FFFF	TERMINATOR .	30E00590	
	*				30E00600	
	****	*******		******	30E00610	
	•			ATION AND START	30E00620	
	****	******	*******	*******	30E00630	
	*	100		%. 	30E00640	
05E8 0 4480 D160	BGIN	BSI I	BEGIN		30690650	
05EA 1 05DC	_	DC	PID	PCT ADDRESS	30E00660	
	•				30E00670	

The state of the s	1.79		4 + 17 ·
05FR 0 6100	STRT IDX 1	1 0	30E00680
05EC 0 69F0	STX 1	RID	30E00690
05ED 1 6500 0630	LDX L	L DSW1A 1442 COL INT	30E00700
05EF 0 6D00 017A	STX LI	l ILO	30E00710
05F1 1 6500 063F	LDX - L)	L DSW4A 1442 OP COMP	30E00720
05F3 0 6D00 01B8	STX LI	RID DSW1A	30E00730
05F5 1 6500 064A	LDX L	DSW48 ZSUI UP CUMP	30E00740
05F7 0 6D00 01B7	STX L	l IL4-3	30E00750
05F9 ● 4000	BSI	CATRL	30E00760
	•		30E00770 30E00780
	********	******************	30E00780
•	*	SEQUENCE CONTROL ROUTINE	30E60790
•	*********	· · · · · · · · · · · · · · · · · · ·	30E00800
	* THIS RU	JUTINE CHECKS SWI AND CONTROLS	30E00810
	+ INE 250	ICENCE IN MUICH 1521 KOOLINE2	
	# ARE RUN		30E00830 30E00840
	*		30E0085 0
05FA 0 0000			30E00860
05FR 0 0000	CHIRE DC	CHI	30E00870
0510 0 0004	BSC I	CN20.4 RR IF NO RIN SELECTO	30E00880
0316 1 4608 0003	*		30E00890
			30F00900
05FF 0 9015	S	RIDCK	30E00910
0600 1 4C08 060B	BSC L		30E00920
0602 0 1810	SRA	16	30E00930
0603 0 DODC	STO	SW1 IF INVALID RTN GO	30E00940
0604 0 DOD8	STO	RID TO RTN ONE	30E00 950
	•		30E00960
0605 1 7401 05DD	CN20 MDX L	RID,1 ADV TO NEXT RTN RID CHECK FOR END OF RTNOM NORMAL SEQUENCE #1 END7 END OF PROCRAM	30E00970
06 07 0 C0D5 0608 0 900D	LD	RID CHECK FOR END OF	30E00980
0608 0 900D	\$	END,-Z END OF PROGRAM	30500990
0609 0 44B0 0164	# 821 I	ENDY E	30E01000 30E01 010
060B 1 6580 05DD		OID YPI-MEN POLITIME NUMBER	30E01010
060D 1 C500 0616	10 11	RID XRI=NEW ROUTINE NUMBER RTTBL-1 FETCH RETURN ADRS	30E01020
060F 0 DOCE	STO	RAD STORE NEW RIN ADDRS	30E01040
0610 0 DOD5	STO	MLSCF+1 SET MLSCF FOR RETURN	30E01050
0611 0 D400 0165	STO L	RTNSW SET RTN START SW	30E01060
0613 0 4480 0161	BSI I	RTTBL-1 FETCH RETURN ADRS RAD STORE NEW RTN ADDRS MLSCF+1 SET MLSCF FOR RETURN RTNSW SET RTN START SW START GO TO MONITOR	30E01070
			30E01080
0615 0 000A		LRTN-RTTBL+1 NRTN-RTTBL+1 +2	30E01090
0616 0 0003	RTNOM DC	NRTN-RTTBL+1 +2	30E01100
**************************************	*		30E01110
	*		
	*	ROUTINE ADDRESS TABLE	30E01130
	•		30E01150
	•	MODMAL POLITIMES	30E01160
0617 1 06C6	RTTBL DC	PTI PHINCH POTATING PATT	30F01170
0618 1 0654	DC	RT2 READ ROTATING PATTERN	30E01180
0619 1 072C	NRTN DC	RT2 READ ROTATING PATTERN RT3 READ COL COUNT CONTROL	30E01190
	•	SELECTIVE ROUTINES	30E01200
061A I 073D	DC	RT4 GANG PUNCH	30E01210
061B 1 074E	DC	RT5 READ GANG PUNCHED DECK	30 E01220
061C 1 078D	DC		30E01230
061D 1 07CE	DC		30E01240
061E 1 0824	DC		30E01250
061F 1 083D	DC .		3CE01260
6 62 0 1 0853	LRTN DC		30E01270
	********		30E01280 30E01290
	*	•	30E01300
	•		
			30E01320
0622 0000	BSS E		30E01330
0622 0 0000	FDACD DC		30E01340
0623 0 1402	DC	/1402	30E01350

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EC NO.

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

	• •			•		
24 6 0000	PCHS	T DC	/0000	START PUNCH	30E01360	
25 0 1401		DC	/1401	JIAN FORGI	30E01370	
26 1 0A29	PUNC		WAREA	PUNCH	30E01380	
27 0 1100		DC	/1100		30E01390	
28 0 0000		DC	/0000			
29 0 1703		DC	/1703	SENSE 1442 DSW	30E01400 30E01410 30E01420	
2A . 0000	SMS2	DC	/0000	SENSE DSW ON 2501 INITIATE READ ON 2501 READ CONSOLE SWITCHE	30E01420	
8 0 4F03		DC	/4F03	DN 2501	30E01430	
C 1 099F	IREA	D DC	RAREA	INITIATE READ	30E01440	
D . 4ECO		DC	/4E00	ON 2501	30E01450	
E 0 0000	SNSW	S DC	4-4	READ CONSOLE SWITCHE	30E01460	
F 0 3400		DC	/3A00		30E01470	
	•				30E01480	
4 p	****	*****	********	***************	30E01490	
F-1	•		INTERRUP	T SERVICE SUBROUTINES	30E01500	
	****	****	*******	*******	30E01510	
	•	,			30E01520	
	*				- 30E01530	
			DSW CHECK	K FOR LEYEL O	30E01540	
					- 30E01550	
	•				30E01560	
0 0 0000	DSW1	A DC	*-*		30E01570	
1 0 08F6		XIO	SNS1	SENSE DSW	30E01580	
2 1 D400	OAE6	STO	L WASO		30E01590	
4 0 1000	la de la companya de	NOP	Proceedings of the second	USE FOR TRAP	30E01600	
5 0 08F0		XIO	PUNCH	PUNCH A COLUMN	30E01610	
6 1 7401	0626	MDX	L PUNCH++1	INCRE PUNCH ADDR.	30E01620	
8 1 C400	OAE6	LD	L WASO	CHECK FOR LOST OR	30E01630	
A O FOla	k ye ,	EOR	K4003	EXTRANEOUS BITS	30E01640	
8 • E81F		DR .	XERR	ACCUMULATE ALL ERRORS	30E01650	
C 0 DO1E		STO	XERR		30E01660	
D 1 4C80	0630	BSC	I DSW1A	RETURN	30E01670	
	•				30E0)680	
	\$			SENSE DSM USE FOR TRAP PUNCH A COLUMN INCRE PUNCH ADDR. CHECK FOR LOST OR EXTRANEOUS BITS ACCUMULATE ALL ERRORS RETURM K FOR LEVEL 4 1442	- 30E01690	
			DSW CHEC	K FOR LEVEL 4 1442	30E01700	
	****				- 20501110	
					30E01720	
F 0 0000	DSW4	A DC	**************************************	CENCE 1443 BCH	30E01730 30E01740	
0 0 08E7		YIU	3M31	35435 T445 DM	30507.350.	
1 1 D-00	OAE7	210	F #424	HEE END TRAP	30501740	
4 1 6700	0450	HUP	1 3 DCHAN	ADDECC OF ANALYCIC BOUT	30501770	
6 1 6F00	0554	CTY	FE MICCETE	CET MUNITUD DETIEM	30501770	
8 1 4C80	043E	BCC	TAUCOLAT	SENSE 1442 DSW USE FOR TRAP ADRESS OF ANALYSIS ROUT SET MONITOR RETURN RETURN	30501700	
	. 	036		WE LAND	30501130	
	****				30F01810	
	1		Dan Uncu	K FOR LEVEL 4 2501	- 30E01830	
	± :				30501840	
A 0 0000	DCH4	a or	*-*		30E01840 30E01850	
8 0 08DE		XIO	SNS2	SENSE DSW	30601860	
C 1 D400			L WAS4		30E01870	
E 0 1000		NOP		USE FOR TRAP	30E01880	
F 1 6700			L3 DSHAN		30E01890	
1 1 6F00		STX	L3 MLSCF+1	Secretaria de la companya de la comp	30E01900	
3 1 4C80		BSC	I DSW4B		30E01910	
					30E01920	
	*				- 30E01930	
	, , , , , , , , , , , , , , , , , , ,		400 f + 1		30E01940	
5 0 4003	K400	3 DC	/4003		30E01950	
6 0 FFF7		7 DC	/FFF7	ing katalog di Pangalog di Pangalog di Pangalog di Pa	30E01960	
7 0 0008		8 DC	/0008		30E01970	
8 O FFFE	KFFF	E DC	/FFFE		30E01980	
9 0 FFF0	KFFF	O DC	/FFF0		30E01990	
A 6 0050		O DC	/0050		30E02000	
B 0 0000	XERR	DC	0		30E02010	
	•	- -	-		30E02020	
	****	*****	*********	*****************		
						•
	<u> </u>			and the control of th		
						030E -0
	095EP67 4203178				PROG ID PAGE	2

						ANALYSIS R	DUTINE FOR DSW	30E020
			****	****	***	*******	OUTINE FOR DSW	30E020
			*					30E020
			.			INTO SOBKO	UTINE ANALYZES THE DSW LEVEL FOUR INTERRUPT AND	305020
4.1						AFTER ART	LEVEL FUUR INTERRUPT ARU	305020
24.5	3.95					KEIUKAS IU	THE ROUTINE VIA THE T OF THE WAIT SUBROUTINE	305050
	* .		#					3AEA311
			475 \$ \$ 1.7	arta, i	6.0	Control of the control of the	The state of the s	30E021
065C	0 COF	E						
		D 0678		851	L	DSWEO.Z	BR IF ANY	30E0214
			•					-30E0219
065F	1 C40	D DAET		LD	L	WAS4	LAST DSW	30E021
_	0 F01	6		EOR		K0800	OP COMP BIT	30E0217
0662	1 409	8 069C	**	BSC	1	WAIT,+-	BR IF ANY LAST DSW OP COMP BIT BR IF NORMAL LVL 4 DSW	30E021
	A. FA1		₹ .				REMOVE L/C + NRDY BITS	3050213
0004	0 E01	8 069C				NEFFE	BR IF OTHERWISE NORMAL	3050220
Vees	1 469	3 0076	•	BSC		MATINA		30E0222
0667	1 F40	D DAE7		EOR	L	WAS4	TO CET BRODED DEM	30E022
0669	1 D40	DOAEA	Rock Williams	STO	Ĕ	028E	TO GET PROPER DSW	30E0224
066B	0 610	1		LDX	1	1	MSG NO THE STATE	30E0225
066C	0 660	0 0112		LDX	LZ	/0112	MSG NO WAS4-O2BE LEVEL 4	30E0225 30E0226 30E0226
066E	1 670	0 0803		LDX	L3	ALVL4	LEVEL 4	JULULL
0670	1 6F0	D OAES		STX	L3	ALPH2	*	30E0228
0072	1 670	0 080D	<i>y</i>	LDX	L3	ADSWE	DSW ERROR	30E0229
0674	1 440	DOACC	* ************************************	651	L	ETYPE	DSW ERROR	3060230
			. 4				DETUDA TO DECCE!**	30E0231
0676	1 408	J 069C		82 C	I	TIAM	RETURN TO PROGRAM	3050232
04.70			****	0.0		.0000		
06/8	0 666) E	K0800 KEFFE K1000	DC DC		/0500 /6666		30E0234 30E0235
0674	0 100	5	KINNO	00		/1000		30E0236
0012	0 100	- r	*1000			71000	and the second of the second	3050230
			*					30F023 <i>8</i>
			*			DSW ERROR	OCCURRED ON LEVEL O	30E0239
			*					30E0240
0675	0 000	0	D2MED	500		***	exist in the second of the second	30E0241 30E0242 30E0243
0676	1 770	J 067A		BSC	-	KIUUU	BD TELLO ONLY	3050242
0015	1 461	9 0070		B3C	-	EULCC 14-	BR IF L/C ONLY	30E0243
0680	o con	4	FOTYP	LD		XERR		30E0245
0681	0 FOD	3		EOR		K4003	ERROR AND PROPER BITS	30E0246
0682	1 D40	D OAE6		STO	L	MASO	DSW WAS	30E0247
								3050346
0684	O COD)		LU		K4003	PROPER DSW	3050298
							ERROR AND PROPER BITS DSW WAS PROPER DSW SHOULD BE	30E0248
								30E0249 30E0250
0685 0687	0 610	D DAEA		LDX	L 1	02BE 2		30E0249 30E0250 30E0251
0685 0687	0 610	D DAEA		LDX	L 1	02BE 2	SHOULD BE MSG ND WASODZBE	30E0249 30E0250 30E0251
0685 0687	0 610	D DAEA		LDX	L 1	02BE 2	SHOULD BE MSG ND WASODZBE	30E0249 30E0250 30E0251
0685 0687	0 610	D DAEA		LDX	L 1	02BE 2	SHOULD BE MSG NO WASOO2BE LEVEL O WAS S/B DSW ERROR	30E0249 30E0250 30E0251 30E0252 30E0253
0685 0687	0 610	D DAEA		LDX	L 1	02BE 2	SHOULD BE MSG NO WASOO2BE LEVEL O WAS S/B DSW ERROR	30E0249 30E0250 30E0251 30E0252 30E0253 30E0254
0685 0687 0688 068A 068C 068C	1 D400 0 6103 0 6600 1 6700 1 6700 1 4400	D DAEA 2 0 0111 0 0808 0 0AE5 0 0BOD 0 OACC		LDX LDX LDX STX LDX 8S1	L L2 L3 L3 L3	OZBE 2 /O111 ALVLO ALPH2 ADSWE ETYPE	SHOULD BE MSG NO WASOO2BE LEVEL O WAS S/B DSW ERROR	30E0249 30E0250 30E0251 30E0252 30E0253 30E0254 30E0255
0685 0687 0688 068C 068C 0690	1 D400 0 6103 0 6600 1 6700 1 6700 1 4400	D GAEA 2 0 0111 0 0808 0 0AE5 0 0BOD 0 OACC		LDX LDX LDX STX LDX BSI	L L2 L3 L3 L3	OZBE 2 /O111 ALVLO ALPH2 ADSWE ETYPE 16	SHOULD BE MSG NO WASOO2BE LEVEL O WAS S/B DSW ERROR	30E0249 30E0250 30E0251 30E0252 30E0253 30E0254 30E0255
0685 0687 0688 068A 068C 068C 0690	1 D400 0 6103 0 6600 1 6700 1 6700 1 4400 0 1010	D 0AEA 2 0 0111 0 0808 0 0AE5 0 080D 0 0ACC		LDX LDX LDX STX LDX BSI SLA STO	1 L2 L3 L3 L3	O2BE 2 /O111 ALVLO ALPH2 ADSWE ETYPE 16 XERR	SHOULD BE MSG ND MASOD2BE LEVEL 0 WAS S/B DSW ERROR	30E0249 30E0250 30E0251 30E0252 30E0254 30E0254 30E0256 30E0256
0685 0687 0688 068A 068C 068C 0690	1 D400 0 6103 0 6600 1 6700 1 6700 1 4400	D 0AEA 2 0 0111 0 0808 0 0AE5 0 080D 0 0ACC		LDX LDX LDX STX LDX BSI	1 L2 L3 L3 L3	OZBE 2 /O111 ALVLO ALPH2 ADSWE ETYPE 16	SHOULD BE MSG ND MASOD2BE LEVEL 0 WAS S/B DSW ERROR	30E0249 30E0250 30E0251 30E0252 30E0254 30E0254 30E0256 30E0257 30E0258 30E0258
0685 0687 0688 0688 068C 068C 0690 0693	1 D400 0 6100 0 6600 1 6700 1 6700 1 6400 0 1010 0 DGC 1 4C80	D GAEA 2 0 0111 0 0808 0 0AE5 0 0B0D 0 0ACC	¢ EORTN	LDX LDX LDX STX LDX BSI SLA STO BSC	1 L2 L3 L3 L3 L	OZBE 2 /O111 ALVLO ALPH2 ADSWE ETYPE 16 XERR DSWEO	SHOULD BE MSG NO WASOO2BE LEVEL O WAS S/B DSW ERROR RETURN TO ANAL ROUTINE	30E0249 30E0250 30E0251 30E0252 30E0254 30E0255 30E0256 30E0256 30E0258 30E0259
0685 0687 0688 0688 0686 0690 0692 0693 0694	1 D400 0 6103 0 6600 1 6700 1 6700 1 4400 0 1010	D OAEA 2 0 0111 0 0808 0 0AE5 0 080D 0 0ACC 0 7 0 0678		LDX LDX LDX STX LDX BSI SLA STO BSC	L 12 13 13 13 1	O2BE 2 /O111 ALVLO ALPH2 ADSWE ETYPE 16 XERR	SHOULD BE MSG NO WASOO2BE LEVEL O WAS S/B DSW ERROR RETURN TO ANAL ROUTINE	30E0249 30E0250 30E0251 30E0252 30E0254 30E0254 30E0256 30E0257 30E0258 30E0258
0685 0687 0688 068C 068C 069C 0692 0693 0694	1 D400 0 6103 0 6600 1 6700 1 6700 1 4400 0 1010 0 DGC 1 4C80	0 0AEA 0 0111 0 0B0B 0 0AE5 0 0B0D 0 0ACC 0 77 0 067B	¢ EORTN	LDX LDX LDX STX LDX BSI SLA STO BSC LD SLA	1 12 13 13 13 1	O2BE 2 /O111 ALVLO ALPH2 ADSWE ETYPE 16 XERR DSWEO WA34 3	SHOULD BE MSG NO WASOO2BE LEVEL O WAS S/B DSW ERROR RETURN TO ANAL ROUTINE	30E0249 30E0250 30E0252 30E0252 30E0253 30E0254 30E0255 30E0257 30E0259 30E0259
0685 0687 0688 068C 068C 0690 0692 0693 0694	1 D400 0 6103 0 6600 1 6700 1 6700 1 4400 0 1010 0 DGC 1 4C80 0 1003	D GAEA 20 0111 0 0808 0 0AE5 0 0B0D 0 0ACC	EORTN	LDX LDX LDX STX LDX 8SI SLA STO 8SC LD 8SC LD 8SC MDX	L 12 L3 L3 L3 L	O2BE 2 /O111 ALVLO ALPH2 ADSWE ETYPE 16 XERR DSWEO WA34 3 EORTN.+Z	SHOULD BE MSG NO MASOO2BE LEVEL O MAS S/B DSW ERROR RETURN TO ANAL ROUTINE CHK IF L/C ON LEVEL 4	30E0249 30E0250 30E0251 30E0252 30E0253 30E0255 30E0256 30E0257 30E0258 30E0250 30E0260
0685 0687 0688 068C 068C 0690 0692 0693 0694	0 660 1 670 1 670 1 670 1 440 0 101 0 DGC 1 4C8 1 C40 0 100 1 4C2	D GAEA 20 0111 0 0808 0 0AE5 0 0B0D 0 0ACC	EORTN EOLCC	LDX LDX LDX STX LDX 8SI SLA STO 8SC LD SLA BSC MDX	L 1 L2 L3 L3 L3 L	O2BE 2 /O111 ALVLO ALPH2 ADSWE ETYPE 16 XERR DSWEO WA34 3 EORTN,+Z EOTYP	SHOULD BE MSG NO MASO02BE LEVEL 0 WAS S/B DSW ERROR RETURN TO ANAL ROUTINE CHK IF L/C ON LEVEL 4 BR IF L/C PROPER BR IF NOT PROPER	30E0249 30E0250 30E0251 30E0253 30E0254 30E0255 30E0256 30E0256 30E0256 30E0262 30E0262
0685 0687 0688 068C 068C 0690 0692 0693 0694 0698 0699	1 D400 0 6160 0 6600 1 6700 1 6700 1 4400 0 1010 0 DGC 1 4C80 1 C400 1 4C20 0 70E4	D GAEA 20 0111 0 0808 0 0AE5 0 0B0D 0 0ACC 0 0678 0 0AE7 3 0692	EOLCC	LDX LDX STX LDX BSI SLA STO BSC LD SLA BSC MDX	L 1 L2 L3 L3 L3 L	OZBE 2 /O111 ALVLO ALPH2 ADSWE ETYPE 16 XERR DSWEO WA34 3 EORTN,+Z EOTYP	SHOULD BE MSG NO MASO02BE LEVEL O WAS S/B DSW ERROR RETURN TO ANAL ROUTINE CHK IF L/C ON LEVEL 4 BR IF L/C FROPER BR IF NOT PROPER	30E0249 30E0250 30E0251 30E0253 30E0254 30E0255 30E0256 30E0256 30E0256 30E0260 30E0260 30E0264
0685 0687 0688 068C 068C 0690 0693 0694 0696 0699	1 D400 0 6100 0 6600 1 6700 1 6700 1 4400 0 1010 1 4C80 1 C400 1 4C20 0 70E4	0 0AEA 0 0111 0 0B0B 0 0AE5 0 0B0D 0 0ACC 0 7 0 067B 0 0AE7 3 8 0692	EOLCC	STO LOX LOX STX LOX BSI SLA STO BSC LD SLA BSC MDX	1 12 13 13 13 1	O2BE 2 /O111 ALVLO ALPH2 ADSME ETYPE 16 XERR DSWEO WA34 3 EORTN,+Z EOTYP ***********************************	SHOULD BE MSG NO MASOO2BE LEVEL O MAS S/B DSW ERROR RETURN TO ANAL ROUTINE CHK IF L/C ON LEVEL 4 BR IF L/C FROPER BR IF NOT PROPER ***********************************	30E0249 30E0251 30E0252 30E0253 30E0254 30E0255 30E0256 30E0256 30E0260 30E0260 30E0262 30E0263 30E0263 30E0264 30E0265
0685 0687 0688 0686 0686 0690 0692 0693 0694 0698 0698	1 D400 0 6100 0 6600 1 6700 1 6700 1 6700 1 4400 0 1010 1 4C80 1 C400 0 1000 1 4C20 0 70E4	0 0AEA 20 0111 0 0B08 0 0AE5 0 0B0D 0 0ACC 0 067B 0 0AE7 3 0692	EORTN EOLCC	STO LDX LDX STX LDX 8SI SLA STO 8SC LD 8SC MDX	1 12 13 13 13 14 15 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	OZBE 2 /O111 ALVLO ALPH2 ADSME ETYPE 16 XERR DSWEO WA34 3 EORTN,+Z EOTYP	SHOULD BE MSG NO MASO02BE LEVEL O WAS S/B DSW ERROR RETURN TO ANAL ROUTINE CHK IF L/C ON LEVEL 4 BR IF L/C FROPER BR IF NOT PROPER	30E0249 30E0250 30E0251 30E0253 30E0254 30E0255 30E0256 30E0256 30E0260 30E0262 30E0263 30E0264 30E0264 30E0264 30E0264 30E0264
0685 0687 0688 0686 0686 0690 0692 0693 0694 0698 0698	1 D400 0 6100 0 6600 1 6700 1 6700 1 6700 1 4400 0 1010 1 4C80 1 C400 0 1000 1 4C20 0 70E4	0 0AEA 2 0 0111 0 0B08 0 0AE5 0 0B0D 0 0ACC 0 77 0 0678 0 0AE7 3 8 0692	EORTN EOLCC	STO LDX LDX STX LDX 8SI SLA STO 8SC LD SLA BSC MDX	1 122 13 13 13 14 1	O2BE 2 /O111 ALVLO ALPH2 ADSME ETYPE 16 XERR DSWEO WA36 3 EORTN.+Z EOTYP ***********************************	SHOULD BE MSG NO MASOO2BE LEVEL O WAS S/B DSW ERROR RETURN TO ANAL ROUTINE CHK IF L/C ON LEVEL 4 BR IF L/C FROPER BR IF NOT PROPER ************************************	30E0249 30E0251 30E0252 30E0254 30E0254 30E0255 30E0256 30E0256 30E0260 30E0262 30E0264 30E0264 30E0264 30E0264 30E0264 30E0266
0685 0687 0688 0686 0686 0690 0692 0693 0694 0698 0698	1 D400 0 6100 0 6600 1 6700 1 6700 1 6700 1 4400 0 1010 1 4C80 1 C400 0 1000 1 4C20 0 70E4	0 0AEA 2 0 0111 0 0B08 0 0AE5 0 0B0D 0 0ACC 0 77 0 0678 0 0AE7 3 8 0692	# EOLCC	STO LDX LDX STX LDX BSI SLA STO BSC LD SLA BSC MDX	I L L L L L L L L L L L L L L L L L L L	OZBE 2 /O111 ALVLO ALPH2 ADSWE ETYPE 16 XERR DSWEO WA34 3 EORTN,+Z EOTYP ***********************************	SHOULD BE MSG NO MASO02BE LEVEL O WAS S/B DSW ERROR RETURN TO ANAL ROUTINE CHK IF L/C ON LEVEL 4 BR IF L/C FROPER BR IF NOT PROPER ************************************	30E0249 30E0251 30E0252 30E0253 30E0254 30E0254 30E0256 30E0256 30E0260 30E0260 30E0264 30E0264 30E0265 30E0266 30E0266 30E0266
0685 0687 0688 0686 0686 0690 0692 0693 0694 0698 0698	1 D400 0 6100 1 6700 1 6700 1 6700 1 4400 0 1010 0 DGC 1 4C80 1 C400 0 1000 1 4C20 0 70E4	D GAEA 20 0111 0 0808 0 0AE5 0 0BOD 0 0ACC 0 0678 0 0AE7 3 0692	# EOLCC	STO LDX LDX STX LDX BSI SLA STO BSC LD SLA BSC MDX	I L L L L L L L L L L L L L L L L L L L	OZBE 2 /O111 ALVLO ALPH2 ADSWE ETYPE 16 XERR DSWEO WA34 3 EORTN,+Z EOTYP ***********************************	SHOULD BE MSG NO MASOO2BE LEVEL O WAS S/B DSW ERROR RETURN TO ANAL ROUTINE CHK IF L/C ON LEVEL 4 BR IF L/C FROPER BR IF NOT PROPER ************************************	30E0249 30E0251 30E0252 30E0254 30E0254 30E0255 30E0256 30E0256 30E0260 30E0262 30E0264 30E0264 30E0264 30E0264 30E0264 30E0266

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2501/1442 MOD 5 FUNCTION TEST

PART NO. 2243550 PAGE 3

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM 2501/1442 MOD 5 FUNCTION TEST

PART NO. 2243550 PAGE 3A

	*	CHEC		-	CELECTION CULTCH	30503730
	•	IF A	N II	ME KUUIINE Meruitine i	SELECTION SWITCH.	30E02720 30E02 730
		MILL	RR	ANCH TO TH	HAS BEEN SELECTED IT	30E02740
	*				CONTROL ROOTINES	30E02750
						30E02760
069C 0 0000	TIAN	DC		/0000		30E02770
069D 0 6500 1000		LDX	Ll	/1000	SET INTERRUPT	30E02780
069F 0 6925		STX	1	HCNT	WAIT CNT	30E02780 30E02790 30E02800
						30E02800
06A0 1 6500 06A9	WAITI	LDX	Ll	WAIT3	CK FOR INTERRUPT BR IF INTERRUPT OCCURED	30E02 810
06A2 1 7400 05E6		MDX	L	MLSCF+1	CK FOR INTERRUPT	30E02820
06A4 9 700B		MDX		WAIT4	BR IF INTERRUPT OCCURED	30E02830
	*					30E02840
06A5 1 6D00 05E5	WAITZ	SIX	Ļl	MLSCF	SET RETURN ADDRESS GO TO MONITOR	30E02850
06A7 0 4480 0161	_	BSI	1	SIAKI	PO IO MONTIOK	30E02860 30E02870
06A9 1 74FF 06C5	WAITS	MDY		WCNT,-1	DECREMENT WAIT CNT	30E02880
06AB 9 70F4	WA113	MDX	-	WAITI	DECKERENT WATT CAT	30E02890
06AC 0 700A		MDX			BR IF NO INTERRUPT	30E02900
00A0 0 .00A						30E02910
06AD 1 C400 05E0	WAIT4	LD	L	SW 1		30E02920
06AF 0 4488 0161		BSI	I	START.+	CK FOR RTN SELECT	30E02930
06B1 1 9400 05DD		S	L	RID	CK FOR NEW ROUTINE BR IF NEW RTN GO TO MONITOR	30E02940
0683 1 4420 05FA		BSI	L	CNTRL+Z	BR IF NEW RTN	30E02950
96B5 0 4480 0161		BSI	I	START	GO TO MONITOR	30E02960 30E02970
	•					30E029 70
06B7 0 6103	WAIT5	LDX	1	3 /0100	MSG NO	30E02980 30E02990 30E03000
0688 0 6600 0100		LDX	LZ	/0100		30E0299 0
06BA 1 6700 0B03				ALVL4	LEVEL 4	30E03000
06BC 1 6F00 0AE5				ALPH2		30E03010 30E0302 0
06BE 1 6700 0B4A		LDX	L3	ANINT ETYPE RAD	NO INTERRUPT START ROUTINE UVER	
06C0 1 4400 0ACC		B21	ŀ.	EITPE	CTART ROUTING SWER	30E03030 30E0304 0
06C2 1 6580 05DE 06C4 • 70E0		MDX	11	WAIT2	RETURN VIA MONITOR	30E030 50
08C4 W 70E0		HUX		WALIE	KETOKA VIA HUNITUK	30E03060
06C5 0 0000	WENT	DC		0	WAIT COUNT STORED HERE	
				•		
0803 0 0000	*			and the same of th		30E03030
0803 0 0000	•		***	********	*******	
3 0000	•		***			3 0E03 080 3 0E03 090
000	*****	****		ROUTINE OF		3 0E03 080 3 0E03 090
0000	*****	****	***	ROUTINE OF	NE - PUNCH ROTATING PATT.	30E03080 30E03090 30E03100 30E03110 30E03120
0000	*****	****	***	ROUTINE OF	THE PUNCHES A ROTATING	30E03080 30E03090 30E03100 30E03110 30E03120 30E03130
0000	* *****	****	***	ROUTINE OF	NE - PUNCH ROTATING PATT.	30E03080 30E03090 30E03100 30E03110 30E03120 30E03130 30E03140
0000	*****	****	***	ROUTINE OF	THE PUNCHES A ROTATING	30E03080 30E03090 30E03100 30E03110 30E03120 30E03130 30E03140 30E03150
	* *****	****	***	ROUTINE OF	NE - PUNCH ROTATING PATT.	30E03080 30E03090 30E031100 30E03110 30E03120 30E03130 30E03140 30E03150 30E03160
	*****	****	***	ROUTINE OF ************************************	NE - PUNCH ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED	30E03080 30E03090 30E03100 30E03110 30E03120 30E03130 30E03140 30E03150 30E03160
06C6 1 4400 0877	* ****** * ***** * * * * * * * * * *	****	***	ROUTINE OF	NE - PUNCH ROTATING PATT.	30E03080 30E03090 30E03100 30E03110 30E03120 30E03130 30E03140 30E03150 30E03160 30E03170 30E03170
06C6 1 4400 0877	* ****** * ***** * * * * * * * * * * *	***** ***** BSI	***	THIS ROUT PATTERN. I AFTER THE	INE PUNCHES A ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED TO INITIALIZE PUNCH	30E03080 30E03090 30E03100 30E03110 30E03120 30E03130 30E03140 30E03150 30E03160 30E03170 30E03180 30E03190
06C6 1 4400 0877 06C8 0 6150	* ****** * ***** * * * * * * * * * * *	***** ***** BSI	***	THIS ROUT PATTERN. I AFTER THE	INE PUNCHES A ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED TO INITIALIZE PUNCH	30E03080 30E03090 30E03100 30E03110 30E03120 30E03130 30E03140 30E03150 30E03160 30E03170 30E03170
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78	******* ****** * * * * * * * * * * *	BSI LDX LD	L 1	THIS ROUT PATTERN. I AFTER THE	NE - PUNCH ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED	30E03080 30E03090 30E03100 30E03110 30E03120 30E03130 30E03140 30E03150 30E03160 30E03170 30E03180 30E03190
06C6 1 4400 0877 06C8 0 6150	******* ****** * * * * * * * * * * *	BSI LDX LD	1 L1 L1	THIS ROUT PATTERN. I AFTER THE INPCH 80 WARA2-1	INE PUNCHES A ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED TO INITIALIZE PUNCH	30E03080 30E03090 30E03100 30E03110 30E03120 30E03130 30E03140 30E03150 30E03160 30E03180 30E03190 30E03190 30E03200
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28	******* ****** * * * * * * * * * * *	BSI LDX LD STO	1 L1 L1	THIS ROUT PATTERN. I AFTER THE INPCH 80 WARA2-1 WAREA-1	INE PUNCHES A ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED TO INITIALIZE PUNCH	30E03080 30E03090 30E03100 30E03110 30E03120 30E03140 30E03150 30E03160 30E03160 30E03170 30E03180 30E03190 30E03200 30E03210
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF	******* ****** * * * * * * * * * * *	BSI LDX LD STO MDX	1 L1 L1	THIS ROUT PATTERN. I AFTER THE INPCH 80 MARA2-1 MAREA-1 -1	INE PUNCHES A ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED TO INITIALIZE PUNCH INITIALIZE PUNCH AREA FOR ROTATING PATTERN	30E03080 30E03090 30E03100 30E03110 30E03120 30E03130 30E03150 30E03160 30E03170 30E03170 30E03190 30E03200 30E03210 30E03220
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF	****** * * * * * * * * * * * * * * *	BSI LDX LD STO MDX	L 1 L1 L1 1	THIS ROUT PATTERN. I AFTER THE INPCH 80 MARA2-1 MAREA-1 -1	INE PUNCHES A ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED TO INITIALIZE PUNCH	30E03080 30E03090 30E03100 30E03110 30E03120 30E03140 30E03150 30E03160 30E03170 30E03180 30E03190 30E03200 30E03200 30E03220 30E03230 30E03240
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF 06CE 0 70FA	****** * * * * * * * * * * * * * * *	BSI LDX LD STD MDX MDX	*** L 1 L1 L1 L1 L1	THIS ROUT PATTERN. I AFTER THE INPCH 80 MARA2-1 WAREA-1 -1 RT1A	INE PUNCHES A ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED TO INITIALIZE PUNCH INITIALIZE PUNCH AREA FOR ROTATING PATTERN	30E03080 30E03100 30E03110 30E03110 30E03120 30E03140 30E03150 30E03160 30E03170 30E03180 30E03190 30E03200 30E03210 30E03220 30E03220 30E03250 30E03250 30E03250 30E03250 30E03260 30E03270
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF 06CE 0 70FA 06CF 1 6500 0A29 06D1 0 6904	****** * ***** * * * * * * * * * * *	BSI LDX LD STO MDX MDX LDX STX	*** L 1 L1 L1 L1 L1	THIS ROUT: PATTERN. I AFTER THE INPCH 80 WARA2-1 HAREA-1 -1 RT1A WAREA PCHA1	TO INITIALIZE PUNCH AREA FOR ROTATING PATTERN	30E03080 30E03100 30E03110 30E03110 30E03120 30E03140 30E03150 30E03160 30E03170 30E03170 30E03200 30E03210 30E03220 30E03220 30E03220 30E03250 30E03250 30E03250 30E03260
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF 06CE 0 70FA	****** * * * * * * * * * * * * * * * *	BSI LDX LD STO MDX MDX LDX	*** L 1 L1 L1 L1 L1	THIS ROUT PATTERN. I AFTER THE INPCH 80 MARA2-1 MAREA-1 -1 RT1A WAREA	INE PUNCHES A ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED TO INITIALIZE PUNCH INITIALIZE PUNCH AREA FOR ROTATING PATTERN	30E03080 30E03100 30E03110 30E03110 30E03120 30E03140 30E03150 30E03160 30E03170 30E03170 30E03200 30E03210 30E03220 30E03220 30E03230 30E03250 30E03250 30E03250 30E03270 30E03270 30E03280 30E03290
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF 06CE 0 70FA 06CF 1 6500 0A29 06D1 0 6904 06D2 1 4400 08FC	****** * ***** * * * * * * * * * * *	BSI LDX LD STO MDX MDX LDX STX	1 1 1 1 1	THIS ROUT PATTERN. I AFTER THE INPCH 80 MARA2-1 MAREA-1 -1 RT1A MAREA PCHA1 CHK14	INE PUNCHES A ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED TO INITIALIZE PUNCH AREA FOR ROTATING PATTERN INITIALIZE PUNCH ADDR CHECK STATUS	30E03080 30E03090 30E03100 30E03110 30E03120 30E03140 30E03150 30E03160 30E03170 30E03180 30E03190 30E03200 30E03220 30E03220 30E03250 30E03250 30E03250 30E03250 30E03250 30E03250 30E03280 30E03290 30E033290 30E033290
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF 06CE 0 70FA 06CF 1 6500 0A29 06D1 0 6904 06D2 1 4400 08FC 06D4 1 4400 095D	****** * * * * * * * * * * * * * * * *	BSI LDX LD STO MDX MDX LDX STX BSI BSI	1 1 1 1 1	THIS ROUT PATTERN. I AFTER THE INPCH 80 MARA2-1 MAREA-1 -1 RT1A WAREA PCHA1 CHK14 PNCH	TO INITIALIZE PUNCH AREA FOR ROTATING PATTERN PARTERN PATTERN	30E03080 30E03090 30E03100 30E03110 30E03120 30E03140 30E03150 30E03160 30E03170 30E03180 30E03200 30E03200 30E03220 30E03220 30E03250 30E03250 30E03250 30E03250 30E03250 30E03270 30E03280 30E03390 30E03310
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF 06CE 0 70FA 06CF 1 6500 0A29 06D1 0 6904 06D2 1 4400 08FC 06D4 1 4400 095D 06D6 0 0000	****** * ***** * * * * * * * * * * *	BSI LDX LD STO MDX MDX LDX STX BSI BSI DC	1 1 1 1 1	ROUTINE OF STATE OF S	INE PUNCHES A ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED TO INITIALIZE PUNCH AREA FOR ROTATING PATTERN INITIALIZE PUNCH ADDR CHECK STATUS	30E03080 30E03100 30E03110 30E03110 30E03120 30E03140 30E03150 30E03160 30E03170 30E03180 30E03190 30E03210 30E03210 30E03220 30E03220 30E03250 30E03250 30E03250 30E03250 30E03270 30E03270 30E03290 30E03390 30E03310 30E03310
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF 06CE 0 70FA 06CF 1 6500 0A29 06D1 0 6904 06D2 1 4400 08FC 06D4 1 4400 095D 06D6 0 0000 06D7 0 0050	****** * * * * * * * * * * * * * * * *	BSI LDX LD STO MDX MDX LDX STX BSI DC DC	1 1 1 1 1	ROUTINE OF STREET CONTROL OF S	TO INITIALIZE PUNCH AREA FOR ROTATING PATTERN INITIALIZE PUNCH AREA FOR ROTATING PATTERN CHECK STATUS TO PUNCH A CARD PUNCH BEGINNING ADDR	30E03080 30E03100 30E03110 30E03110 30E03120 30E03140 30E03150 30E03160 30E03170 30E03170 30E03200 30E03210 30E03220 30E03220 30E03220 30E03220 30E03230 30E03250 30E03250 30E03250 30E03250 30E03250 30E03250 30E03250
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF 06CE 0 70FA 06CF 1 6500 0A29 06D1 0 6904 06D2 1 4400 08FC 06D4 1 4400 095D 06D6 0 0000	****** * ***** * * * * * * * * * * *	BSI LDX LD STO MDX MDX LDX STX BSI BSI DC	1 1 1 1 1	ROUTINE OF STATE OF S	TO INITIALIZE PUNCH AREA FOR ROTATING PATTERN INITIALIZE PUNCH AREA FOR ROTATING PATTERN CHECK STATUS TO PUNCH A CARD PUNCH BEGINNING ADDR	30E03080 30E03100 30E03110 30E03110 30E03120 30E03140 30E03150 30E03150 30E03160 30E03180 30E03190 30E03200 30E03210 30E03220 30E03230 30E03250
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF 06CE 0 70FA 06CF 1 6500 0A29 06D1 0 6904 06D2 1 4400 08FC 06D4 1 4400 095D 06D6 0 0000 06D7 0 0050 06D8 0 70F9	****** * ***** * * * * * * * * * * *	BSI LDX LD STO MDX MDX LDX STX BSI DC MDX	1 1 1 1 1 1 L1 L1 L	THIS ROUT PATTERN. I AFTER THE INPCH 80 MARA2-1 MAREA-1 -1 RT1A MAREA PCHA1 CHK14 PNCH +-+ 80 RT1B	INE PUNCHES A ROTATING PATT. INE PUNCHES A ROTATING NORMAL TERMINATION IS LAST CARD IS PUNCHED TO INITIALIZE PUNCH AREA FOR ROTATING PATTERN INITIALIZE PUNCH ADDR CHECK STATUS TO PUNCH A CARD PUNCH BEGINNING ADDR ERROR RETURN POINT	30E03080 30E03090 30E03100 30E03110 30E03120 30E03140 30E03150 30E03160 30E03170 30E03180 30E03200 30E03210 30E03220 30E03220 30E03250 30E03250 30E03250 30E03250 30E03250 30E03250 30E03250 30E03250 30E03250 30E03250 30E03250
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF 06CE 0 70FA 06CF 1 6500 0A29 06D1 0 6904 06D2 1 4400 08FC 06D4 1 4400 095D 06D6 0 0000 06D7 0 0050 06D8 0 70F9 06D9 1 7401 06D6	****** * ***** * * * * * * * * * * *	BSI LDX LD STO MDX MDX LDX STX BSI DC MDX MDX	1 1 1 1 1 L 1 L L L	THIS ROUT PATTERN. AFTER THE INPCH 80 MARA2-1 MAREA-1 -1 RT1A MAREA PCHA1 CHK14 PNCH +-+ 80 RT1B PCHA1+1	TO INITIALIZE PUNCH AREA FOR ROTATING PATTERN PATTERN PATTERN PATTERN PUNCH AREA FOR ROTATING PATTERN PUNCH ACRD PUNCH A CARD PUNCH BEGINNING ADDR ERROR RETURN POINT INCRE PUNCH ADDR	30E03080 30E03100 30E03110 30E03110 30E03120 30E03140 30E03150 30E03160 30E03170 30E03180 30E03190 30E03200 30E03210 30E03220 30E03220 30E03250 30E03250 30E03250 30E03250 30E03270 30E03280 30E03290 30E03310 30E03310 30E03310 30E03330 30E03340 30E03350 30E03350 30E03350
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF 06CE 0 70FA 06CF 1 6500 0A29 06D1 0 6904 06D2 1 4400 08FC 06D4 1 4400 095D 06D6 0 0000 06D7 0 0050 06D8 0 70F9 06D9 1 7401 06D6 06DB 1 C400 095C	****** * ***** * * * * * * * * * * *	BSI LDX LD STO MDX MDX LDX STX BSI DC DC MDX MDX	1 11 1 1 1 1 L L L L L L L L L L L L L	ROUTINE OF STATE OF S	TO INITIALIZE PUNCH AREA FOR ROTATING PATTERN INITIALIZE PUNCH ADDR CHECK STATUS TO PUNCH A CARD PUNCH BEGINNING ADDR ERROR RETURN POINT INCRE PUNCH ADDR HAS ROTATION REACHED	30E03080 30E03100 30E03110 30E03110 30E03120 30E03140 30E03150 30E03150 30E03170 30E03170 30E03210 30E03210 30E03220 30E03220 30E03220 30E03220 30E03220 30E03230 30E03240 30E03250 30E03250 30E03250 30E03250 30E03250 30E03350 30E03310 30E03310 30E03330 30E03330 30E03330 30E03330 30E03330 30E03330
06C6 1 4400 0877 06C8 0 6150 06C9 1 C500 0A78 06CB 1 D500 0A28 06CD 0 71FF 06CE 0 70FA 06CF 1 6500 0A29 06D1 0 6904 06D2 1 4400 08FC 06D4 1 4400 095D 06D6 0 0000 06D7 0 0050 06D8 0 70F9 06D9 1 7401 06D6	****** * ***** * * * * * * * * * * *	BSI LDX LD STO MDX MDX LDX STX BSI DC MDX MDX	1 1 1 1 1 L 1 L L L	THIS ROUT PATTERN. AFTER THE INPCH 80 MARA2-1 MAREA-1 -1 RT1A MAREA PCHA1 CHK14 PNCH +-+ 80 RT1B PCHA1+1	TO INITIALIZE PUNCH AREA FOR ROTATING PATTERN PATTERN PATTERN PATTERN PUNCH AREA FOR ROTATING PATTERN PUNCH ACRD PUNCH A CARD PUNCH BEGINNING ADDR ERROR RETURN POINT INCRE PUNCH ADDR	30E03080 30E03100 30E03110 30E03110 30E03120 30E03140 30E03150 30E03160 30E03170 30E03180 30E03190 30E03200 30E03210 30E03220 30E03220 30E03250 30E03250 30E03250 30E03250 30E03270 30E03280 30E03290 30E03310 30E03310 30E03310 30E03330 30E03340 30E03350 30E03350 30E03350

06E1 0 70E6	MDX	RTIC BR IF YES	30E03400
0051 0 1050	*	KIIC DR II IES	30E03410
	*********	************************	
	•		30E03430
	********	*******	30E03440
	•		30E03450
	•	THIS ROUTINE READS THE ROTATE DECK	30E03460
	•	PUNCHED IN ROUTINE ONE, CHECKING THE	30E03470
	•	DATA AGAINST THE PUNCH PATTERN	30E03480
	*		30E03490
	*		30E03500
	•		30E03510
06E2 1 0A79	RT2CC DC	WARAZ FOR AREA END CHACK	30E03520
06E3 0 0000	RT2CS DC	*-* COMPARE START ADDR	30E03530
	•		30E03540
06E4 1 4400 08E	9 RT2 PSI L	INROR TO INITIALIZE READR	30E03550
	•		30E03560
06E6 0 6150			30E03570
06E7 1 C500 0A7			30E03580
06E9 1 D500 0A2		· · · · · · · · · · · · · · · · · · ·	30E03590
06EB 0 71FF			30E03600
06EC 0 70FA	MDX	****	30E03610 30E03620
0/50 1 /500 043	=		30E03630
06ED 1 6500 0A2		WAREA INITIALIZE COMPARE STAR RT2CS ADDRESS	30E03640
06EF 0 69F3	STX 1		30E03650
06F0 0 6100		. 0	30E03660
06F1 1 6D00 0A0		LNISW CLEAR FIRST LN SW	30E03670
06F3 1 4400 092			30E03680
00.5 1 4400 071	*	ones orange	30E03690
06F5 1 4400 09F	l BSI L	RDACD TO READ A CARD	30E03700
06F7 0 0050	DC	The state of the s	30E03710
	*		30E03720
06F8 0 61B0	LDX 1	-80	30E03730
06F9 1 6680 06E	LDX IZ	RT2CS COMPARE START ADDRESS	30E03740
06FB 1 C500 09F	RT2B LD LI	RAREA+81 CHAR READ	30E03750
06FD 0 F200	EOR 2	O PROPER CHAR	30E03760
06FE 1 E400 065	AND L	KFFFO REMVE UNWANTED BITS	30E03770
0700 1 4020 070	BSC L	RT2DA+Z BR IF DATA ERROR	30E03780
	•		30E03790
0702 0 7201		P +1 TO NEXT COMP CHAR	30E03800
0703 0 7101		· ·	30E03810
0704 0 70F6	MDX	RT2B CONTINUE	30E03820
	*		30E03830
0705 0 CODC	RT2F LD	RT2CC LAST ADDRESS	30E03840
0706 0 FODC	EOR	RT2CS COMP TO THIS TIME	30E03850
0707 1 4C18 06E	BSC L	RT2D++- BR IF END OF PATTERN	30E03860 30E03870
0700 1 7/01 0/5		DTOCK AND THICKE COMP START ADDR	
0709 1 7401 06E	B MDX L MDX	RT2CS,+1 INCRE COMP START ADDR RT2C BR TO CONTINUE	30E03880 30E03890
0/08 U 10E4	*	NIZE ON TO CONTINUE	30E03900
	_	DATA ERROR	30E03910
	*		30E03920
	*		30E03930
070C 1 6D00 OAE		COL STO ERROR COLUMN	30E03940
070E 1 7451 OAE		COL++81	30E03950
0710 0 1000	NOP	SKIPPED BY MDX	30E03960
0711 0 C200		O PROPER CHAR	30E03970
0712 1 D400 OAE		O2BE	30E03980
0714 1 C500 09F	נס נו	RAREA+81 ERROR CHAR	30E03990
0716 1 D400 OAE		WASD	30E04000
0718 0 690F		RT2D1+1 SAVE XR1	30E04010
0719 0 6A10	STX 2	RT2D2+1 SAVE XR2	30E04020
071A 0 6108		. 8	30E04030
071B 0 6600 013	B LDX L2	2 /0138	30E04040
071D 1 6700 0B1		ADTAE	30E04050
071F 1 4400 0A0		ETYPE	30E04060
	* *		30E04070

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									· · · · · · · · · · · · · · · · · · ·	
	0721	,	C400	0552		LD	L	SW3		30E04080
		_	4020			BSC	Ĺ	RT2F.Z	BR IF 1 LN OPTION SEL	30E04090
		_	6D00			STX	-	LNISW	SET FIRST LINE SW	30E04100
		_			DT 201			*-*	RESTORE XR1	30E04110
			5500 6600		RT2D1 RT2D2			*-*	RESTORE XR2	30E04110
				0000	KIZUZ	*DX	LZ	RT2E	READ ANOTHER CARD	30E04120
	072B	U	1006		_	CUA		KIZE	READ ANDTHER CARD	30E04140
			1						******	30E04150
			1.11					ROUTINE TO		30E04150
					*				1KEE +++++++++++++++++++++++++	
		-			*****		+++			30E04170
			-		Ĭ.			THIS POUT	INE READS CARDS VARYING	30E04190
					-					30E04200
					·			INE CULUM	COUNT FROM ONE TO EIGHTY	30E04210
					÷					30E04220
•									•	30E04230
	0726		4400	0880	RT3	BSI	L	INDER	INITIALIZE READER	30E04240
	0120	•	7700	0009	*	631	L	INRDR	INITIALIZE READER	30E04250
	072E	•	4101		RT3D	LDX	,	1	INITIALIZE NUMBER	30E04260
			6904		N 130	STX		NCOL3	F COLUMNS	30E04270
				092D	RT3A	BSI	Ľ	CHK25	CHECK STATUS	30E04280
	0730		7700	0920	*	031	L	CHRZJ	CHECK STATUS	30E04290
	0722	,	4400	0051	•	851	L	RDACD	READ A CARD	30E04300
		-	0000	0771	NC DL 3		_	*-*	KLAD A CARD	30E04310
	0134	U	0000		*	<i>D</i> C				30E04320
	0735	۸	COFE		RT3E	LD		NCOL3	NUMBER OF COLS	30E04330
				065A	KIJE	EOR	L	K0050	HOHDER OF COLD	30E04340
		_		072E		BSC	Ĺ	RT3D++-	BR IF COL COUNT = 80	30E04350
				0734		MDX	Ĺ	NCOL3,+1	INCRE NO OF COLS	30E04360
			70F3			MDX	_	RT3A		30E04370
		•			*					30E04380
					*****	****	***	*******	**************	30E04390
					*				DURGANG PUNCH	30E04400
					****	****	***		**************	
					*					30E04420
					*			THIS ROUT	INE READS ONE CARD	30E04430
					*			FROM THE	2501 AND PUNCHES THAT	30E04440
					*				PEATEDLY ON THE 1442	30E04450
			-		*					30E04460
					*					30E04470
					*					30E04480
	073D	1	4400	0889	RT4	BSI	L	INRDR	INITIALIZE READER	30E04490
	073F	1	4400	092D		BSI	L	CHK25	CHECK STATUS	30E04500
	0741	1	4400	09F1		BSI	L	RDACD	READ CARD	30E04510
	0743	ð	0050			DC		80	COL COUNT	30E04520
	0744	1	4400	0877		BSI	L	INPCH	INITIALIZE PUNCH	30E04530
					*					30E04540
	0746	1	4400	OBFC	RT4A	BSI	L	CHK14	CHECK STATUS	30E04550
	0748	1	4400	095D		BSI	L	PNCH	PUNCH CARD	30E04560
	074A	1	09A0			DC		RAREA+1	FROM READ AREA	30E04570
		_	0050			DC		80	COL COUNT	30E04580
			7000			MDX		*	ERROR RETURN	30E04590
	074D	0	70F8		* *	MDX		RT4A		30E04600
								•		30E04610
					****	***	***		**********	
					*				IVEREAD GANG PUNCHED DECK	30E04630
					****	****	***	*******	***************	
					*			2.42		30E04650
									INE READS CARDS, COMPARING	30E04660
					*				FROM EACH CARD WITH THAT	30E04670
								FROM THE F	-1K21	30E04680

FROM THE FIRST

INITIALIZE READER

CHECK STATUS

COL COUNT

READ FIRST CARD

BSI L INRDR

BSI L CHK25 BSI L RDACD

80

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0754 0 0050

074E 1 4400 08B9

0750 1 4400 092D 0752 1 4400 09F1

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30E04680 30E04680 30E04690 30E04700

30E04710

30E04720

30E04730

30E04740

30E04750

										30E04760
	0755					LDX	1	80		30E04770
				099F	RT5A				MOVE COMPARE DATA	30E04780
		_		0A28					TO WAREA FOR COMPARE	30E04790
	075A					MDX	_	-1		30E04800
	0 758	0	70FA		_	MDX		RT5A		30E04810
				-165	*				DECET AN 1 CH	30E04820
				OACB	KIDB			LNISW	RESET LN 1 SW	30E04830 30E04840
	0760			092D		BSI BSI		CHK25 RDACD	READ CARD	30E04850
	0762	_		0971		DC	L	80	COLCOUNT	30E04860
	0763					LDX	1		FOR COMP	30E04870
	0.05	•	0100		*	CON	•			30E04880
	0764	1	C500	09F0	RT5C	LD	Ll	RAREA+81	CHAR READ	30E04890
				0A79		EOR	LI	WAREA+80	COMP CHAR	30E04900
	0768	1	E400	0659		AND	L	KFFF0	REMOVE UNWANTED BITS	30E04910
	076A	1	4C20	076F		BSC		RT5D,Z	BR IF DATA ERROR	30E04920
	076C				RT5E		1			30E04930
	076D					MDX		RT5C	CONTINUE SCAN	30E04940
	076E	0	70ED			MDX		RT5B	READ ANOTHER CARD	30E04950
					*			0.054.03	C.1140 0540	30E04960
				09F0				MASD	CHAR READ	30E04970 30E04980
	-	-		0AE9 0A79		LD		WAREA+80	PROPER CHAR	30E04990
				DAEA				O2BE	TRUTER GIIAR	30E05000
	0777					STX		RT5D1+1	SAVE XR1	30E05010
	0778					MDX	_	+81	TO COL NO	30E05020
	0779					NOP	-			30E05030
				OAEB		STX	Ll	COL		30E05040
	077C	0	6108			LDX	1	8	MSG NO	30E05050
	077D	0	6600	0138		LDX	LZ	/0138	DATA ID	30E05060
	077F							ADTAE	DATA ERROR	30E05070
	0781	1	4400			BSI	L	ETYPE		30E05080
		_							÷ Company	30E05090
		_		05E2		LD		SW 3	BR IF 1 LN ONLY OPTION SEL	30E05100
	0785			OACB		BSC		RT5B,Z LN1SW	SET LINE 1 SW	30E05120
				0000	RT5D1			*-*	RESTORE XR1	30E05130
	078B			0000		MDX		RT5E		30E05140
		-			*	. = '				30E05150
						****	***	*****	********	30E05160
					*			ROUTINE SI		30E05170
						****	***	****	*******	
					*			TUTE DOUTT	ME DUNCHER A	30E05190
					*			SELECTED P	NE PUNCHES A	30E05200 30E05210
					*				#11ENN+	
					*					30E05230
										30E05240
	078C	0	0000		RT6SW	DC		*-*	SWITCH SETTING	30E052 50
					*					30E05260
	078D	1	4400	0877	RT6	BSI	L	INPCH	INITIALIZE PUNCH	30E05270
		_								30E05280
				3000				/3000	TIMING CONST FOR	30E05290
	0791	1	6D00	0874	*	SIX	LI	HTCHT	WAITING LOOP	30E05300
	0793	^	4104		•	LDX	,	4	MSG NO	30E05310 30E05320
•	0794					LDX		0	NO ATA	30E05330
	0795			0B2B		LDX		ASETP		30E05340
	0797					BSI	Ĺ	TYPE	TYPE SET PATT MSG	30E05350
				-	*					30E05360
	0799	1	6500	078C		LDX		RT6SW	DATA ADDR	30E05370
	079B					STX		SNSWS		30E05380
	0 79D	1	0000	062E	RT6B	XIO	L	SHSHS	READ CONSOLE SWITCHE	30E05390
•		٠.			in the second			07464	CUTTOU CETTING	30E05400
	079F					LD		RT6SW	SWITCH SETTING	30E05410
	07A0 07A1					SRA		3 E	CHECK BIT 12 SKIP IF SW 12 NOT ON	30E05420 30E05430
	J. ~ L	•	400 4			550		-	oner is on it not on	20202730

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2501/1442 MOD 5 FUNCTION TEST

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									•
07A2	0	700A			MDX		RT6D	BRIF SW 12 ON	30E05440
				*			==	SKIP WHEN COUNT ZERO BR TO DLY VIA HON BR WHEN COUNT = 0 RETURN POINT VIA MONITOR PUNCH PATTERN REMOVE 12 BIT FILL WRITE AREA WITH SELECTED BITS	30E05450
	-		0874		MDX	L	WTCNT,-1	SKIP WHEN COUNT ZERO	30E05460
07A5					MDX		RI6C	BR TU DLY VIA MUN	30505470
07A6	•	10F8			MDX		KIGA	BK WHEN COUNT = 0	30505480
	_							0571001 007117	30505490
07A7	_			RT6C	LDX	LI	KIOB	KETUKN PUINT	30505510
0749					STX	ŕι	CTART	WIA MONITOR	30505510
07AB	Ů,		0101	*	BSI		SIARI	ATM UNITION	30505530
07AD	_	CODE		RT6D			DTACU	DINCH DATTERN -	30505550
			0656	KIOD	AND		KIDSW WEEE7	PEMOVE 12 RIT	30505550
07B0	_		00 30		LDX	٠,	NTTF!	KEHUVE 12 DIT	30505540
0781	ĭ	DE 00	0A28	RT6E	STO		UADEA-1	ETII UDITE ADEA	30505570
0783			UAZB	RIGE	MDX	٠,	MUNITA-I	WITH CELECTED RITC	30505580
0784		-			MDX	•	DTAE	• Secrete bills	30505590
0154	•	TUPL		*	пих		NIOL		30E05600
0785	1	4400	08FC	PTAE	I 2 A		CHK14	CHECK STATUS	30E05610
0103	•	7700	00.0	*	03.	•	CINCLY	Oncor States	30F05620
A787	,	C 4 0 0	05E1	•	1.0		CHS	CHECK CC DETION	30505630
0789					RSC	ĭ	RTAH.7	CHECK CO OF TECH	30505640
07BB			0.02		IDX	٠,	80	MAKE COL COUNT RO	30605650
07BC					STX	î	NUDIA	MARE GOE GOOM! GO	30505660
0.00		0,05		*	J.,	-	ncozo		30505670
07BD	1	4400	095D	RTAG	RSI	1	PNCH	PUNCH A CARD	30E05680
07BF	_		0,50	N.100	DC.	_	WARFA	PUNCH AREA	30E05690
0700				NCOL6	DC.		80	NO DE COLS	30E05700
0761	-				MUX		*	FRROR RETURN	30E05710
0.01	•			* /					30E05720
0702	1	00.00	062E		XIO	Ł	SNSMS	READ CONS SWS	30E05730
0.02	•	0000	0022	•	~.0	-	333		30E05740
0704	٥	COCT			LD		RTASM		30E05750
	_		0A29		FOR	L	WAREA	CHECK FOR CHANGES	30E05760
	_		079D		BSC	ī	RT68.Z	BR IF SWS CHANGED	30E05770
	•			*		_		CHECK STATUS CHECK CC OPTION MAKE COL COUNT 80 PUNCH A CARD PUNCH AREA NO OF COLS ERROR RETURN READ CONS SWS CHECK FOR CHANGES BR IF SWS CHANGED TO PUNCH ANOTHER CD	30E05780
0769	0	70EB			MDX		RT6F	TO PUNCH ANOTHER CD	30E05790
	•								30E05800
07CA	1	D400	07C0	RT6H	STO	L	NCOL6	STO COLUMN COUNT	30E05810 ·
07CC					MDX		RTAG	•	30E05820
				*					30E05830

				*			ROUTINE SE	VEN ***********	30E05850
					****	***	******	*******	
									30605870
								TED PATTERN	30E05880
				*					
				*					30E05900
	_							CULTCH CETTING	30E05910 30E05920 30E05930
07CD	0	0000			DC			SWITCH SETTING	30505030
.755			0000	*			THOOD	TAITTIAL TIE DEADED	30505040
DICE	1	 00	0889	KI/	D 21	L	INKUK	INITIALIZE READER	30505940
0700	^	4 5 0 0	3000	# 8774	104		/3000	TIMING CONST EOR	30503430
				RIIA	CTY		WTCNT	INITIALIZE READER TIMING CONST FOR WAITIBG LOOP	30E05970
0102		6D00	0014	*	317		WICHI	WATTIBO COOP	30E05980
0704	^	4105		-	LDX	1	5	MSG ND.	30E05990
0705	-				LDX		ó	NO DATA	30E06000
07D6	-		OR2R		LDX		ASETP		30E06010
07D8					BSI		TYPE	TYPE SET PATT MSG	30E06020
0.00	•	- 100		•					30E06030
07DA	1	6500	07CD		LDX	L1	RT7SW	DATA ADDR	30E06040
07DC					STX		SNSWS		30E06050
O7DE				RT7B		Ĺ		READ CONSOLE SWITCHE	30E06060
	Ĩ.,								30E06070
07E9	0	COEC			LD		RT7SW	SWITCH SETTING	30E06080
07E1					SRA		3	CHECK BIT 12	30E06090
07E2					BSC		Ē	SKIP IF SW 12 NOT ON	30E06100
07E3					MDX		RT7D	BRIF SN 12 ON	30E06110

			1 1						
									30E06120
0	7F4 1	74FF	0874		MDX	L	WTCNT1	SKIP WHEN COUNT ZERO	30E06130
		7001	00.4		MDX	•	RT7C	BR TO DLY VIA MON	30E06140
_		70E8			MDX		RT7A	BR WHEN COUNT = 0	30E06150
		6500		RT7C		. 1	RT7B	RETURN POINT	30E06160
		6D00		KIIC	STX		MLSCF	KEIOKA FOIAI	30E06170
		4480			BSI	ī	START	VIA MONITOR	30E06180
U	120,0	7700	0101	*	831		SIAKI	AIN HOUITOR	30E06190
	7EE 1	4400	0020	RT7D	BSI	L	CHK25	CHECK STATUS	30E06200
U	166 1	4400	0920	K110	031		CHKZS	CHECK STATUS	30E06210
•	750 1	C400	OFFI	-	LD	L	SW 2	CHECK CC OPTION	30E06220
		4020			BSC	_		CHECK CC OF ITOM	30E06230
			0821			L,	RT7H,Z	MAKE COL COUNT BO	
		6150			LDX	_	80 NCOL 7	MAKE COL COUNT NO	30E06240
		6905			STX		NCOL7		30E06250
		6100			LDX	_	0	DECT IN 1 PH	30E06260
Ū	11-1	6D00	DACE	± '	STX	LI	LN1SW	REST LN 1 SW	30E06270
			0051	*				0540 4 6400	30506280
		4400		RT7G		L	RDACD	READ A CARD	30E06290
O	7FB 6	0050		NCOL7	DC		80	NO OF COLS	30E06300
_				*					30E06310
		6580			LDX		NCOL7		30E06320
		C500	099F	RT7E		Ll	RAREA	CHAR READ	30E06330
		FOCC			EOR		RT7SW	SWITCH SETTING	30E06340
		E400			AND	L		REMOVE TERM BIT	30E06350
		4C20	0808		BSC	L	-	BR IF DATA ERROR	30E06360
		71FF		kT7FR		. 1			30E06370
		70F7			MDX		RT7E	CONTINUE SCAN	30E06380
0	807 0	70E6			MDX		RT7D	READ ANOTHER CARD	30E06390
		1.4		•					30E06400
_		FOC4		RT7F	EOR		RT7SW	RESTURE CHAR READ	30E06410
		D400			STO	_	WASD		30E06420
		6D00	OAEB		STX	Ll	COL	COL NUMBER	30E06430
		COBF			LD		RT7SW	PROPER CHAR	30E0644 0
		D400			STO	. L			30E06450
		690E			STX	_	RT7F1+1	SAVE XR1	30E06460
0	811 0	6108			LDX	1	8	MSG ND	30E06 470
		6600			LDX	L2	/0138	DATA ID	30E06480
		6700			LDX	L3	ADTAE	DATA ERROR HDG	30E06 490
0	816 1	4400	OACC		BSI	L	ETYPE		30E06 500
				*					30E06 510
		C400			LD	L	SW 3		30E06520
			07EE		BSC	L	RT7D,Z	BR IF 1 LN ONLY OPTION SEL	30E06530
		6D00			STX		LNISH	SET LINE 1 SW	30E06540
		6500	0000	RT7F1		Ll	*-*	RESTORE XR1	30E06550
0	820 0	70E4			MDX		RT7FR	CHECK FOR MORE ERRORS	30E06560
				*					30E06570
,O	821 0	DOD9		RT7H	STO		NCOL7	STO COLUMN COUNT	30E06580
0	822 0	70D6			MDX		RT7G		30E06590
								:	30E06600
				****	***	***	*******	***************	30E06610
				*			ROUTINE E	IGHT	30E06620
				****	****	***	*******	*****	30E06630
				*		- 1			30E06640
							REPRODUCE	ROUTINE	30E06650
				*					30E06660
								The control of the co	30E06670
				*			No. of the second		30E06680
0	823 0	0000		RTBSA	DC		*-*	WAS4 SAVE AREA	30E06690
	•			*					30E06700
0	824 1	4400	0889	RT8	BSI	L	INRDR		30E06710
_		4400		- · · · ·	BSI	Ľ	INPCH	INITIALIZE PUNCH	30E06720
		1010	·•		SLA	7	16		30E06730
		DOF9			STO		RTBSA	CLEAR WAS4 SAVE AREA	30E06740
	, 0	55. 7		*	3.0		K T U J A	SELAN HAST SATE AREA	
•		4400	ORFC	RTSA	BSI		CHK14	CHECK STATUS	30E06750
				N 1 0 A		_		CHECK SIRIUS	30E06760
0					ı n				
0	82C 0	COF6	0457		LD		RTBSA	DECTORE MACA END CHASE	30E06770
0	82C 0 82D 1				STO BSI	L 1		RESTORE WAS4 FOR CHK25 CHECK STATUS	30E06770 30E06780 30E06790

42 MOD 5 FUNCTION TE	•	PAGE 6	-	2501/1442 MOD 5 FUNCTION TES		PAGE
en e						
0831 1 4400 09F1	BSI L RDACD READ CARD	30E06800		086D 1 4C20 0872	BSC L RTAC+Z BR IF SWS SET	30E 07430 30E0 7440
0833 0 0050	DC 80 COL COUNT	30E06810	: :	086F 1 7401 0851 0871 • CODF	MDX L RTAPC +1 UPDATE PASS COUNT LD RTAPC LOAD NEW DELAY FACT	
0834 1 C400 OAE7 0836 0 DOEC	LD L WAS4 STO RTBSA SAVE STATUS FOR CHK25	30E06820 30E06830		0872 0 DODF	RTAC STO RTADO STORE DELAY FACTOR	30E07460
0837 1 4400 095D	BSI L PNCH PUNCH CARD	30E06840		0873 0 70E8	MDX RTAA BR TO READ NXT CD	30E07470
0839 1 09A0	DC RAREA+1 FROM READ AREA	30E06850	3 J			30E07480
083A 0 0050	DC 80 COL COUNT	30E06860			*	30E07490
083B 0 7000	MDX	30E06870	1		**************************************	
083C 0 70ED	TUA KIDA K	30E06880 30E06890			*****************	
	*****************					30E07530
	* ROUTINE NINEREPLACE ROTATE PATTER		1 3			30E07540
	*****************				•	30E07550
	* THIS DON'T NE DEDI ACEC THE DOTATE	30506930	8 1		* INITIALIZE 1442 SUBROUTINE	30E07570
•	 THIS ROUTINE REPLACES THE ROTATE PATTERN WITH THAT FROM THE FIRST 	30E06940 30E06950	* *		******************	
	* CARD IN THE 2501	30E06960				30E07590
	* IT THEN RETURNS.TO ROUTINE ONE TO	30E06970	1 1		* THIS SUBROUTINE INITIALIZES TH	
	* - PUNCH THE PATTERN	30E06980	1		* 1442 PRIOR TO STARTING ANY ROU	
•		30E06990 30E07000	1 1		* AND TYPES A LOAD BLANKS MESSAG	SE 30E07620 30E07630
		30E07000 30E07010				30E07640
083D 1 4400 0889	RT9 BSI L INRDR INITIALIZE READER	30E07020				30507650
		30E07030		0874 0 0000	WTCNT DC +-+	30E07660
083F 1 4400 092D	RT9A BS1 L CHK25 CHECK STATUS	30E07040		0875 0 0000	K0000 DC /0000	30E07670
0841 1 4400 09F1 0843 0 0050	BSI L RDACD READ CARD DC 80 CDL COUNT	30E07050 30E07060	8 2	0876 0 0001	K0001 DC /0001	30E076 80 30E0 7690
0844 0 6150	LDX 1 80	30E07070	1	0877 0 0000	INPCH DC +-+	30E07700
	*	30E07080		0878 0 6500 1442	LDX L1 /1442 MACH TYPE	30E07710
0845 1 C500 099F	RT9B LD L1 RAREA REPLACE CHAR	30E07090		087A 1 6D00 OAEE	STX L1 MACH	30E07720
0847 1 D500 0A78	STO L1 WARAZ-1 IN ROTATE CONSTANT AREA	30E07100		087C 0 6101	LDX 1 1 MSG ND.	30E07730
0849 0 71FF	MDX 1 -1	30E07110		087D 0 6600 0100	LDX L2 /0100 ND DATA LDX L3 ALDMR LOAD AND MAKE RDY M	30E07740 ISG 30E07750
084A 0 70FA 084B 0 6100	MDX RT9B LDX 1 O	30E07120 30E07130		087F 1 6700 0850 0881 1 4400 0AEF	BSI L TYPE	30E07760
084C 1 6D00 05E0	STX L1 SW1 ZERO ROUTINE SEL SW	30E07140		0883 0 1010	SLA 16	30E07770
QB4E 1 4C00 05EB	BSC L STRT RETURN TO START OF PROG	30E07150		0884 1 D400 OAE7	STO L WAS4	30E 07780
		30E07160		0886 1 0C00 0628	INRST XIO L SNS1 RESET UNSERVICED IN	
	**********************			0888 0 6500 3000	INHAT LDX L1 /3000 TIMING CONST	30E07 800 30E07 810
• *	* ROUTINE TEN	30E07180	• •	088A 1 6D00 08FB 088C 1 0C00 0628	STX L1 INTCT FOR TIMING LOOP WATER XIO L SNS1 GET DSW	30E07810 30E07820
	•	30E07200		088E 1 D400 OAES	STO L WASI	30E07830
	READ WITH VARIABLE DELAY	30E07210		0890 0 1000	NOP USE FOR TRAP	30E07840
	BETWEEN CARDS	30E07220		0891 1 4098 0877	BSC I INPCH++- BR IF RDY AND NORMA	
		30E07230 30E07240	8 8	0893 1 E400 0658 0895 1 4C20 089F	AND L KFFFE BSC L DSWEI, Z BR IF DSW INCORRECT	30E 07860 30E 07870
		30E07240 30E07250		0897 1 4080 0877	BSC I INPCH	30E07880
0850 0 0000	RTASW DC #-# SWITCH SETTING	30E07260		0899 1 6500 088C	IRDYR LDX L1 WATER SET RETURN POONT	30E07890
0851 0 0000	RTAPC DC +-+ ROUTINE PASS COUNTER	30E07270		089B 1 6D00 05E6	STX L1 MLSCF+1	30E07900
0852 0 0000	RTADC DC +-+ DELAY COUNTER	30E07280	İ	089D 1 4C00 06AD	BSC L WAIT4 CHK SW1 + RET TO MO	
0853 1 4400 0889	RTA BSI L INRDR INITIALIZE READER	30E07290 ° 30E07300	8 0	089F 1 C400 OAE8	DSWEILD L WASI INCORRECT DSW	30E 07920 30E 07930
0855 1 6500 0850	LDX L1 RTASW INIT SENSE SWS 10CC	30E07310	- . -	08A1 1 4C04 08B5	BSC L RDYER, E BR IN NRDY BIT ON	30E07940
0857 1 6D00 062E	STX L1 SNSWS	30E07320		08A3 0 COD2	LD K0001	30E0795 0
0859 0 6101	LDX 1 1 INITIALIZE COUNTERS	30E07330		0844 1 D400 OAEA	STO L OZBE SHOULD BE	30E07960
085A 0 69F6	STX 1 RTAPC	30E07340		08A6 1 74FF 08FB	INMSG MDX L INTCT,-1 DECRE COUNT	30E07970
085B 0 69F6	STX 1 RTADC	30E07350 30E07360	1 0	08A8 0 70F0 08A9 0 6105	MDX IRDYR BR TO MON LDX 1 5 MSG NO	30E 07980 30E 07990
085C 1 4400 092D	RTAA BSI L CHK25 CHECK STATUS	30E07370		08AA 0 6600 0114	LDX 1 7 H36 H0	30E08000
085E 1 0C00 062C	XIO L IREAD READ A CARD	30607380		08AC 1 6700 0817	LDX L3 AINIT INITIALIZING	30608010
0860 1 0C00 062A	RTAA1 XIO L SHS2 SENSE DSW	30E07381		08AE 1 6F00 0AE5	STX L3 ALPH2	30E08020
0862 0 4804 0863 0 70FC	BSC E SKIP IF NOT BUSY MDX RTAA1 LOOP UNTIL OP COMP	30E07382	1	08B0 1 6700 0B0D	LDX L3 ADSWE DSW ERROR	30E08030
0864 0 1010	SLA 16	30E07383 30E07384	1 0	0882 1 4400 OACC 0884 0 70D1	BSI L ETYPE TYPE ERROR MSG MDX INRST BR TO RESET AND TRY	30E08040 AGN 30E08050
0865 1 D400 05E6	STO L MLSCF+1 NO INTERRUPT RET ENTRY	30E07385	- 1	0885 0 COBF	RDYER LD KOOOO	30E08060
0867 1 74FF 0852	RTAB MDX L RTADC,-1 DECRE DELAY COUNT	30E07390		0886 1 D400 OAEA	STO L OZBE SHOULD BE	30E0807 0
9869 9 70FD	MDX RTAB BR TO DELAY	30E07400		0888 • 70ED	MDX INMS6	30E08080
086A 1 0C00 062E	XIO L SHSWS SENSE CONSOLE SW	30E07410	1	the same of	*	30E08090
086C 0 COE3	LD RTASM SWITCH SETTING	30E07420	1			
	with the second second second second	Salah Sa				
15JUN67 09SEP67		PROG ID 030E-0	I D	DATE 15JUN67 09SEP67		PROG ID 030E-
420317 4203178		PAGE 6		EC NO. 420317 4203178		PAGE
			•	The state of the s		
the second secon	and the control of the first of the control of the	a de la companya de l	11		e Name (North Albert et al. 1800)	ASTA EXTO SHOOLSE

		0000	1442	CHK14	DC LDX		*-* /1442	MACH TYPE
8	•	0000		INTCT	DC		*-*	WAIT LOOP COUNTER
				•				ing the state of t
				*			GO TO CON	TROL FOR NEXT ROUTINE.
				•			OR LAST C	ARD ON THE 1442. IF L/C.
				* *			THIS SURR	DUTINE CHECKS FOR NRDY
				****	****	***	******	*************
				****	****	**		######################################
	-		-			<u>۔</u> دعم		
			05E6 06AD		STX	L	MLSCF+1 WAIT4	CHK SW1 + RET TO MONITOR
			OSCE	RIRDY			RWATE	RETURN POINT
	•	.020		•			r tung	the state of the s
	-	70ED	DAEA		STO	L	O2BE Rinms	
		C083	0454	RRDYE			K0000	READY DSW
	-							TO HEALT MOMENT
•		70D7		*	MOX		RINRS	TRY TO RESET AGAIN
	1	4400	OACC	4	651	L	ETYPE	
			0800		LDX		ADSHE	DSM ERROR
			0817 0AE5		LDX		AINIT ALPH2	INUTIALIZING
			0114		LDX	-	/0114	DATA ID
6		6105			LDX	. 1	5	ASC NO
	-	74FF 7010	08F8	RINHS	MDX	L	INTCT1 RIRDY	DEC COUNT
			OAEA		STO	L	O2BE	DEC COUNT
	0	C096			LD		K0001	PROPER DSW
	=		OSF1	RDSME	BSC	L	RRDYE.E	ERROR AND NRDY
			08B9 OAE8	BUSHE	BSC	ı	INRDR Wasi	RETURN TO TEST ROUTINE GET ERROR DSW
	1	4C20	OBDB		BSC	Ĺ	RDSWE , Z	BR IF DSW ERROR
	1	E400	0679	-	AND	L	KEFFE	REMOVE L/C AND NRDY BITS
1	L	4098	0889		BSC	1	INRDR,+-	BR IF RDY AND NORMAL
		1000			NOP			USE FOR TRAP
-			OAE8		STO	Ĺ	WASI	
1		0000	062A	RWATE	XIO	L	SNS2	CET DSM
	1	6D00	OBFB		STX	Ll	IWTCT	FOR TIMING LOOP
			3000	RINHA			/3000	TIMING CINST
_			062A	RINRS		ĭ	SNS2	RESET UNSERVICED INT
	-	1010 D400	OAE7	•	SLA STO	L	16 WAS4	·
	_	1010			C1 A		14	•
	_	4400			851	L	TYPE	
	_		0850		LDX		ALDMR	LOAD NSG
	_	6101	0100		LDX		1 /0100	MSG NO DATA ID
			OAEE		STX		MACH	MCC MO
			2501		LDX	Lĺ	/2501	MACH TYPE
ı		088A		INRDR	DC	*-	•	
				*				
				-				
				*				R TO STARTING ANY ROUTINE
				*			THIS ROUT	INE INITIALIZES THE
					***	***	*****	***********
				-				E 2501 SUBROUTINE

		OAET		LD	L	HAS4	LAST OP COMP DSW CMECK LAST CARD BR IF NOT LAST CARD FEED LAST CARD OUT MSG NO DATA ID LAST CARD	30E08
0903				SLA	1 44 5.	3	CHECK FASI CAKD	30508
		0911		850	L	CHRDY,-	BR IF NUT LAST CARD	30508
		0622		XIO	L	FDACD	FEED LAST CARD OUT	30508
				LDX	1	3	MSG NO	30608
0909 (6600	0100 OAFA		LDX	L2	/0100	DATA ID	30508
				LDX	L3	ALCD	LAST CARD	30E08
090D 1					_			
090F 1	4400	05FA 3000					TO ROUTINE CONTROL	30E08
0911 0	6500	3000	CHRDY	LDX	Ll	/3000		30E08
0913				STX	Ll	IWTCT		30E08
0915 1	0000	0628	CRDYL	XIO	L	SNS1	SENSE DSW	30E089
0917 1				BSC	L	CWTFR.E	BR IF NOT READY	30E089
0919				BSC		CHK14	SENSE DSW BR IF NOT READY RETURN IF READY	30E089 30E089
		• • • •	*		-		· · · · · · · · · · · · · · · · · · ·	30E089
						TIMING LO		
0018 1	TAFE	08F8	CUTER	MDX	8	IMTCT1	OP FOR NOT READY DECREMENT COUNT LOOP UNTIL TIMEOUT MSG NO	30F08
091D C			OHITA	HUX	•	CBUAB	LOOP HATTI TIMEDUT	30F08
-				LDX	•	2	MCC NU	30508
091E (0102			LUX		2 /0100 ANRDY	MASA ID	30E08
0911	6600	0100		LUX	LZ	/0100	UATA IU	30E08
		0B00		LUX	L3	ANKUT	MSG NO Data ID Not ready	JUEU6'
0923 1						TYPE		30E090
0925 1	4000	0911		B2C	L	CHRDY		30E090
			# .					30E090
		0915	CRDYR	FDX	Ll	CRDYL	SET RETURNTO MONITOR	30E090
0929 1						MLSCF+1		30E090
0928 1	4C00	06AD		BSC	L	WAIT4	CHK SW1 + RET TO MONITOR	30E096
			*					30E09
			中中中 中	****	**	****	*************************	30E090
						CHECK STA	TUS 2501 SUBROUTINE	30E096
			***	****	***	*****	*******	30E090
			8					30E09
			*			THIS SURRI	DUTINE CHECKS FOR NRDY OR	30F09
			*			LAST CARD	ON THE 2501, 15 1/C. IT	30F09
			8			LINKS TO	ON THE 2501. IF L/C. IT	30F09
								30F091
			*					30E09
								30E09
092D (CHK25	DC .		n_s		30000
0920 (4500	2501	CHAZZ	. D. V		/2501	MACH TYPE	30E091
092E	6500	2501 OAEE		LUA	LI	15201	HACH TIPE	30509
		DAEE		SIX	LI	HACH		30E09
0930	6000			LD	L			
0932 1	C400				_			30007
0932 1 0934 0	C400			CIA		3	CHECK FOR LAST CARD	30E09
0932 1 0934 0 0935 1	C400 1003 4C10	0940		SLA BSC	L	RCHRD.		30E09
0932 1 0934 0 0935 1	C400 1003 4C10	0940		SLA BSC LDX	L	3	MSG NO	30E09
0932 1 0934 0 0935 1	C400 1003 4C10	0940		SLA BSC LDX	L	3	MSG NO DATA ID	30E09
0932 1 0934 0 0935 1 0937 0 0938 0	C400 1003 4C10 6103 6600 6700	0940 0100 0AFA		SLA BSC LDX LDX LDX	L 1 L2 L3	3 /0100 ALCD	MSG NO DATA ID LAST CARD	30E092 30E092
0932 1 0934 0 0935 1 0937 0 0938 0	C400 1003 4C10 6103 6600 6700	0940 0100 0AFA		SLA BSC LDX LDX LDX	L 1 L2 L3	3	MSG NO DATA ID LAST CARD	30E092 30E092
0932 1 0934 0 0935 1 0937 0 0938 0	C400 1003 4C10 6103 6600 6700	0940		SLA BSC LDX LDX LDX	L 1 L2 L3	3 /0100 ALCD TYPE	MSG NO DATA ID LAST CARD	30E092 30E092 30E092 30E092
0932 1 0934 0 0935 1 0937 0 0938 0	C400 1003 4C10 6103 6600 6700 4400	0940 0100 OAFA OAEF		SLA BSC LDX LDX LDX	L L2 L3 L	3 /0100 ALCD TYPE	MSG NO DATA ID LAST CARD	30E092 30E092 30E092 30E092
0932 1 0934 0 0935 1 0937 0 0938 0 0936 1	C400 1003 4C10 6103 6600 6700 4400	0940 0100 OAFA OAEF		SLA BSC LDX LDX LDX BS1	L L2 L3 L	3 /0100 ALCD TYPE	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL	30E092 30E092 30E092 30E092 30E092 30E092
0932 1 0934 0 0935 1 0937 0 0938 0 0936 1	C400 1003 4C10 6103 6600 6700 4400	0940 0100 0AFA 0AEF	*	SLA BSC LDX LDX LDX BSI	L L2 L3 L	3 /0100 ALCD TYPE CNTRL	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL	30E092 30E092 30E092 30E092 30E092 30E092
0932 1 0934 0 0935 1 0937 0 0938 0 0936 1 0936 1	C400 1003 4C10 6103 6600 6700 4400 4400	0940 0100 0AFA 0AEF 05FA 3000	*	SLA BSC LDX LDX LDX BSI BSI	L 1 L2 L3 L	3 /0100 ALCD TYPE CNTRL /3000	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0935 1 0938 0 0938 1 093C 1	C400 1003 4C10 6103 6600 6700 4400 4400 6500 6500	0940 0100 0AFA 0AEF 05FA 3000 08FB	# # RCHRD	BSI BSI LDX LDX BSI BSI	L L2 L3 L L	3 /0100 ALCD TYPE CNTRL /3000 IWTCT	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0935 1 0937 0 0938 1 093C 1	C400 1003 4C10 6103 6600 6700 4400 4400 6500 6000	0940 0100 0AFA 0AEF 05FA 3000 08F8 062A	*	SLA BSC LDX LDX LDX BSI BSI LDX STX XIO	L L2 L3 L L1 L1 L1	3 /0100 ALCD TYPE CNTRL /3000 IMTCT SNS2	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSW	30E09 30E09 30E09 30E09 30E09 30E09 30E09 30E09
0932 1 0934 0 0935 0 0938 0 0938 1 093C 1 093E 1 0940 0 0942 1 0946 1	C400 1003 4C10 6103 6600 6700 4400 4400 6500 6000 6000	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A	# # RCHRD	SLA BSC LDX LDX BSI BSI LDX STX XIO BSC	L L3 L L1 L1 L1	3 /0100 ALCD TYPE CNTRL /3000 INTCT SNS2 RCWTF+E	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSM BR IF NOT READY	30E09 30E09 30E09 30E09 30E09 30E09 30E09 30E09 30E09
0932 1 0934 0 0935 1 0937 0 0938 1 093C 1	C400 1003 4C10 6103 6600 6700 4400 4400 6500 6000 6000	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A	≑ ≎ RCHRD RCRDY	SLA BSC LDX LDX LDX BSI BSI LDX STX XIO	L L2 L3 L L1 L1 L1	3 /0100 ALCD TYPE CNTRL /3000 IMTCT SNS2	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSW	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0935 1 0938 0 0938 1 0936 1 0940 0 0942 1 0944 1 0948 1	6000 6000 6000 6000 6000 6000 6000 600	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A 092D	* RCHRD RCRDY	SLA BSC LDX LDX BSI BSI LDX STX XIO BSC BSC	L 1 L 1 L 1 L L 1	3 /0100 ALCD TYPE CNTRL /3000 IMTCT SNS2 RCMTF,E CHK25	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSW BR IF NOT READY RETURN TO TEST ROUTINE	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0935 1 0937 0 0938 1 0936 1 0940 0 0942 1 0944 1 0946 1	C400 1003 4C10 3 6103 0 6600 6700 4400 6500 6000 6000 4C04 4C80	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A 092D	≑ ≎ RCHRD RCRDY	SLA BSC LDX LDX BSI BSI LDX STX XIO BSC BSC	L L3 L L1 L1 L1	3 /0100 ALCD TYPE CNTRL /3000 INTCT SNS2 RCWTF,E CHK25	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSM BR IF NOT READY	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0935 1 0937 0 0938 1 0936 1 0946 1 0946 1 0948 1	C400 1003 4C10 3 6103 0 6600 4400 4400 6500 6000 6000 4C04 4C80	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A 092D	* RCHRD RCRDY	SLA BSC LDX LDX LDX BSI BSI LDX STX XIO BSC BSC MDX MDX	L L2 L3 L L1 L1 L1	3 /0100 ALCD TYPE CHTRL /3000 IWTCT SNS2 RCWTF+E CHK25 IWTCT-1 RCRYR	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSW BR IF NOT READY RETURN TO TEST ROUTINE DECREMENT COUNT	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0937 0 0938 0 0938 1 0938 1 0938 1 0948 1 0948 1 0948 1	C400 1003 4C10 6103 6600 6700 4400 6000 6000 4C04 74FF 7008	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A 092D	* RCHRD RCRDY	SLA BSC LDX LDX LDX BSI BSI LDX STX XIO BSC BSC MDX MDX LDX	L 1 L2 L3 L L1 L1 L L L L L L L L L L L L L L	3 /0100 ALCD TYPE CNTRL /3000 IWTCT SNS2 RCWTF.E CHK25 IWTCT1 RCRYR 2	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSM BR IF NOT READY RETURN TO TEST ROUTINE DECREMENT COUNT MSG NO	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0937 0 0938 0 0938 1 0936 1 0940 0 0942 1 0944 1 0948 1 0948 0 0948 0	1 C400 1003 1 4C10 3 6103 3 6600 1 6700 1 4400 1 4400 1 4C80 1 74FF 7008 9 6102	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A 092D 08FB	* RCHRD RCRDY	SLA BSC LDX LDX BSI BSI LDX STX XIO BSC BSC MDX MDX LDX LDX	L 1 L2 L3 L L1 L1 L L 1 L2	3 /0100 ALCD TYPE CNTRL /3000 IWTCT SNS2 RCWTF+E CHK25 IWTCT-1 RCRYR 2 /0100	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSW BR IF NOT READY RETURN TO TEST ROUTINE DECREMENT COUNT MSG NO DATA ID	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0937 0 0938 0 0938 1 0938 1 0938 1 0948 1 0948 1 0948 1	1 C400 1003 1 4C10 3 6103 3 6600 1 6700 1 4400 1 4400 1 4C80 1 74FF 7008 9 6102	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A 092D 08FB	* RCHRD RCRDY	SLA BSC LDX LDX LDX BSI BSI LDX STX XIO BSC BSC MDX MDX LDX	L 1 L2 L3 L L1 L1 L L 1 L2	3 /0100 ALCD TYPE CNTRL /3000 IWTCT SNS2 RCWTF.E CHK25 IWTCT1 RCRYR 2	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSM BR IF NOT READY RETURN TO TEST ROUTINE DECREMENT COUNT MSG NO	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0937 0 0938 0 0938 1 0936 1 0940 0 0942 1 0944 1 0948 1 0948 0 0948 0	C400 1003 4C10 6600 6700 4400 6500 6000 6000 4C80 74FF 7008 6102 6602 6700	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A 092D 08FB	* RCHRD RCRDY	SLA BSC LDX LDX BSI BSI LDX STX XIO BSC BSC MDX MDX LDX LDX	L 1 L2 L3 L L L1 L L L L L L L L L L L L L L L	3 /0100 ALCD TYPE CNTRL /3000 IWTCT SNS2 RCWTF+E CHK25 IWTCT-1 RCRYR 2 /0100	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSW BR IF NOT READY RETURN TO TEST ROUTINE DECREMENT COUNT MSG NO DATA ID	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0937 0 0938 0 0938 1 0936 1 0940 0 0942 1 0944 1 0948 1 0948 1	C400 1003 4C10 6600 6700 4400 6500 6000 6000 4C80 74FF 7008 6102 6602 6700	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A 092D 08FB	* RCHRD RCRDY	SLA BSC LDX LDX BSI BSI LDX STX XIO BSC MDX MDX LDX LDX LDX	L 1 L2 L3 L L L1 L L L L L L L L L L L L L L L	3 /0100 ALCD TYPE CNTRL /3000 IMTCT SNS2 RCMTF+E CHK25 IMTCT-1 RCRYR 2 /0100 ANRDY	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSW BR IF NOT READY RETURN TO TEST ROUTINE DECREMENT COUNT MSG NO DATA ID	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0937 0 0938 0 0938 1 0936 1 0940 0 0942 1 0944 1 0948 1 0948 1	C400 1003 4C10 6103 6600 6700 4400 4400 6000 6000 74FF 7008 6102 6600 6700	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A 092D 08FB	* RCHRD RCRDY	SLA BSC LDX LDX BSI BSI LDX STX XIO BSC MDX MDX LDX LDX LDX	L 1 L2 L3 L L L1 L L L L L L L L L L L L L L L	3 /0100 ALCD TYPE CNTRL /3000 IMTCT SNS2 RCMTF+E CHK25 IMTCT-1 RCRYR 2 /0100 ANRDY	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSW BR IF NOT READY RETURN TO TEST ROUTINE DECREMENT COUNT MSG NO DATA ID	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0937 0 0938 0 0938 1 0938 1 0948 1 0944 1 0944 1 0948 1 0948 1 0948 1 0948 1 0948 1	6400 1003 4010 6103 6600 6700 4400 6500 6000 4004 74FF 7008 6102 6600 4400	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A 092D 08FB	* RCHRD RCRDY RCWTF	SLA BSC LDX LDX BSI BSI LDX XIO BSC BSC MDX LDX LDX LDX LDX LDX	L1 L2 L3 L L1 L L L L2 L3 L	3 /0100 ALCD TYPE CNTRL /3000 IWTCT SNS2 RCWTF.E CHK25 IWTCT1 RCRYR 2 /0100 ANRDY TYPE RCHRD	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSM BR IF NOT READY RETURN TO TEST ROUTINE DECREMENT COUNT MSG NO DATA ID NRDY TRY AGAIN	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0937 0 0938 0 0938 1 0936 1 0940 0 0942 1 0944 1 0944 1 0944 0 0946 0 0947 0 0955 1	C400 1003 4C10 6103 6600 6700 4400 6500 6000 6000 6000 6000 6000 60	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A 092D 08FB	* RCHRD RCRDY RCWTF	SLA BSC LDX LDX BSI BSI LDX STX XIO BSC MDX LDX LDX LDX LDX LDX LDX LDX	L1 L2 L3 L L1 L L3 L3 L1	3 /0100 ALCD TYPE CNTRL /3000 IWTCT SNS2 RCWTF+E CHK25 IWTCT-1 RCRYR 2 /0100 ANRDY TYPE RCHRD RCRDY	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSM BR IF NOT READY RETURN TO TEST ROUTINE DECREMENT COUNT MSG NO DATA ID NRDY TRY AGAIN SET RETURN POINT	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;
0932 1 0934 0 0937 0 0938 0 0938 1 0938 1 0948 1 0944 1 0944 1 0948 1 0948 1 0948 1 0948 1 0948 1	C400 1003 14010 6103 6600 6700 4400 6500 6000 4000 4000 7000 4400 7000 6500 6700 6700 6700	0940 0100 0AFA 0AEF 05FA 3000 08FB 062A 094A 092D 08FB 0100 0B00 0AEF	* RCHRD RCRDY RCWTF	SLA BSC LDX LDX BSI BSI LDX XIO BSC BSC MDX LDX LDX LDX LDX LDX	L1 L2 L3 L L1 LL L2 L3 L L1 L1 L1	3 /0100 ALCD TYPE CNTRL /3000 IWTCT SNS2 RCWTF.E CHK25 IWTCT1 RCRYR 2 /0100 ANRDY TYPE RCHRD	MSG NO DATA ID LAST CARD RETURN TO SEQ CONTROL FOR TIMING LOOP SENSE 2501 DSM BR IF NOT READY RETURN TO TEST ROUTINE DECREMENT COUNT MSG NO DATA ID NRDY TRY AGAIN	30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09; 30E09;

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

2501/1442 MOD 5 FUNCTION TEST

DATE EC NO. 5 |

PROG ID

030E-0

DATE

EC NO.

15JUN67 09SEP67

4203178

420317

IBM MAINLENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

		*			PUNCH A C	**************************************	30E09480 30E09490
		*****	****	***	*******	************	30E09500
		•			THIS SURR	OUTINE PUNCHES A CARD -	30E09510 30E09520
						S THAT THE PROPER NUMBER OF	
						ERE PUNCHED	30E09540
		*					30E09550
		*					30E09560
		PBGAD	o r		+-+	BEGINNING ADDRESS	30E09570 30E09580
		TERAD			WAREA	TERMINATOR ADDRESS	30E09590
		PNCH			*-*		30E09600
14	42				/1442	MACH TYPE	30E09610
	VEE				MACH		30E09620
)95D)626		LD STO	I	PNCH	GET START ADDRESS PLACE IN IOCC	30E09630 30E09640
U	020		STO	-	PUNCH PBGAD		30E09650
	950		MDX	L		DEGINITING ADDRESS	30E09660
	95D		A	ī		ADD NO DE COLS	30E09670
(0876		S	Ĺ	K0001		30E09680
			STO		TERAD	NEW ADDRESS	30E09680 30E09690
	095D	_	MDX	L	PNCH++1		30E09700
_	0050	•			75040	5576W 758W 6WAR	30E09710
	095C 0657		LD OR	L	TERAD KOOOB		30E09720 30E09730
	095C		-	ĭ	TERAD	APPLI TERM DIT	30E09740
	0770	•	3.0	•	ILNAD		30E09750
	0624		XIO	L	PCHST		
	069C		BSI	Ĺ		START PUNCH Wait for op comp	30E09760 30E09770
							30E09780
	626		MDX				30E09790
_	95C		LD		TERAD	LOAD PROPER LAST CHAR	30E09800
	0626 098C		EOR		PUNCH	AD TE HIMICHAL END	30E09810
	0980 0950		BSC MDX	L	PUNEN,Z PNCH,+1	BR IF UNUSUAL END To Normal Return	30E09820 30E09830
	095C	PRTN		ì	TERAD		30E09840
	0656		AND	i	KFFF7		30E09850
	095C		STO	Ī	TERAD		30E09860
	095D		BSC	1	PNCH		30E09870
		*		_			30E09880
	095D	PUNEN		I	PNCH		30E09890
	0AED 0626		STO LD	Ĺ			30E09900 30E09910
	0020		S	_	PBGAD	BEGIN ADDR	30E09920
	0876		Ā	L			30E09930
	OAEB		A STO	L	COL	COL COUNT WAS	30E09940 30E09950
			LDX	1	6	MSG NO	30E09950
	01A0				/01A0	DATA ID	30E09960 30E09970
	083D				ACCER	COL COUNT ERROR	
	OACC		BS I MDX	L	ETYPE PRTN		30E09980 30E09990
			MUA				30E10000
		****	****	**	*******	*********	
		*			READ A CA	RD ROUTINE	30E10020
			****	***	*******	*******	30E10030
		*			***** * * * * * * * * * * * * * * * *	THE BEADE A SARE TOTAL	30E10040
		•				INE READS A CARD INTO	30E10050
		*			THE READ	AREA:	30E10060 30E10070
							30E10070
							30E10090
		RAREA	DC		*-*	WORD COUNT	30E10100
			BSS		80	AREA	30E10110
			DC		70001	TERMINATOR FOR LENGTH	30E10120
)	2501	RDACD			#-# /2501	RETURN ADDR	30E10130
	2501		LDX	LI	/2501	MACH TYPE	30E10140
4)9SEP67						PROG II
	203178						PAGE

09F4	1	6D00	OAEE		STX	Ll	MACH	TO CLEAR READ AREA TO	30E101
09F6	1	C400	0876		LD	L	K0001	TO CLEAR READ AREA TO	30E101
	_					_		ALL TERMINATORS	30E101
09F9	1	D500	099F	RDACR			RAREA		30E101
09FB	0	71FF	11.5		MDX	1	-1		30E101
09FC	•	70FC			MDX		RDACR	FETCH NO OF COLS STO AT WORD COUNT TO RETURN INITIATE READ MAIT FOR OP COMP UNUSUAL END ADDR OF LAXT CHAR LOAD LAST CHAR BR IF TERM STILL THERE TO NEXT CHAR POSITION AFTER LAST CHAR BR IF TERM NOT THERE NO OF COLUMNS SHOULD BE	30E102
09FD	1	C480	09F1	1 Kara - 1	LD	I	RDACD	FETCH NO OF COLS	30E102
09FF	1	D400	099F	70 S	STO	L	RAREA	STO AT WORD COUNT	30E102
OAOl	1	7401	09F1		MDX	L	RDACD,+1	TO RETURN	30E102
0A03	1	0000	062C		XIO	L	IREAD	INITIATE READ	30E102
0A85	ī	4400	069C		BSI	νĒ	WAIT	WAIT FOR OP COMP	30E102
				**		- 7	CHECK FOR	UNUSUAL END	30E102
0407	1	6580	099F	1	LDX	11	RAREA	ADDR OF LAXT CHAR	30E102
0A09	ī	C500	099F		LD	LI	RAREA	LOAD LAST CHAR	30E102
OAOB	1	4004	0412		BSC	L	RUNEN.E	BR IF TERM STILL THERE	30E102
COAO	ō	7101			MDX	-ī	+1	TO NEXT CHAR	30E103
OAOF	ĭ	C500	099F		LD	- 11	RAREA	POSITION AFTER LAST CHAR BR IF TERM NOT THERE NO OF COLUMNS SHOULD BE	30E103
0410	ī	4CR4	09F1		BSC	7	RDACD-F	BR IF TERM NOT THERE	30E103
0412	i	4580	000F	DUNEN	IDX	iı	RARFA	NO OF COLUMNS	30F103
0414	i	6000	OAFD	NO.IL	STX	- ; ;	COLCT	SHOULD BE	30F103
0416	ò	6150	075		IDX	-;	80	0110025 02	30F103
0417	1	(500	099F	BEIU	10	11	RARFA	FIND LAST CHAR READ	30F103
OATO	1	4004	0426	VELD	BSC	1	REREN.E	FIND LAST CHAR READ BR IF NOT LAST CHAR COL COUNT WAS MSG NO DATA ID CO8 COUNT ERROR	30E103
ONID	1	4004	OAEB	BENUM	STY	1,	CUI	COL COUNT WAS	305103
OAID	Ţ	6107	UMED	KENUN	317		7	MEC NO	305103
	-		01A0		LDX		(0) 40	DATA ID	305103
			0B3D		LDX	L 2	VOLMO	COL COUNT WAS MSG NO DATA ID COB COUNT ERROR	305104
			OACC		LUA	LJ	ETVOE	COO COOM! EKKOK	305104
					D21	Ļ	BDACD	RETURN TO TEST ROUTINE	305104
UAZT	ī	7000	09F1	-	B3C		KUACU	KETOKA TO TEST KOUTTNE	305104
	_			*					30E104
		71FF		RERFN		1	-1		30E104
	_	70EF			MDX		RELD		30E104
UAZ8	0	70F2		_	MDX		RENON		30E104
				*				*******	3051040
									2051054
								A FOR PUNCH	30E1050
				****	****	***		A FOR PUNCH	30E105
0420		9010		*****	****	***		*******	30E105
		8010		***** * WAREA	DC	***		*******	30E105 30E105 30E105
DAZA	0	4020		***** * WAREA	DC DC	***		COLUMN 1	30E105 30E105 30E105 30E105
OAZA OAZB	0	4020 2040		***** * WAREA	DC DC DC			**************************************	30E105 30E105 30E105 30E105
OAZA OAZB OAZC	0	4020 2040 1080		***** * WAREA	DC DC DC DC			**************************************	30E105 30E105 30E105 30E105
0A2A 0A2B 0A2C 0A2D	0000	4020 2040 1080 0900		***** * WAREA	DC DC DC DC DC			**************************************	30E105; 30E105; 30E105; 30E105; 30E105; 30E105;
0A2A 0A2B 0A2C 0A2D 0A2D	00000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105
OAZA OAZB OAZC OAZD OAZE OAZE	00000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105
OAZA OAZB OAZC OAZD OAZE OAZF OA3O	0000000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105
OAZA OAZB OAZC OAZD OAZE OAZF OA30 OA31	0000000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105
OAZA OAZB OAZC OAZD OAZE OAZF OA3O OA31 OA32	00000000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105
0A2A 0A2B 0A2C 0A2D 0A2E 0A2F 0A30 0A31 0A32	0000000000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105
0A2A 0A2B 0A2C 0A2D 0A2E 0A3F 0A31 0A32 0A33	00000000000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105
0A2A 0A2B 0A2C 0A2D 0A2E 0A3C 0A31 0A32 0A34 0A35	00000000000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105
0A2A 0A2B 0A2C 0A2C 0A2E 0A31 0A31 0A32 0A33 0A35 0A36	00000000000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105
0A2A 0A2B 0A2C 0A2C 0A2E 0A3C 0A31 0A32 0A33 0A34 0A35	00000000000000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105 30E105 30E106 30E106 30E106 30E106 30E106 30E106 30E106
0A2A 0A2B 0A2C 0A2C 0A2E 0A3C 0A31 0A32 0A33 0A34 0A35	00000000000000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105 30E105 30E106 30E106 30E106 30E106 30E106 30E106
OA2A OA2B OA2C OA2C OA2F OA3O OA31 OA36 OA35 OA36 OA37	00000000000000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105 30E105 30E106 30E106 30E106 30E106 30E106 30E106
OA2A OA2B OA2C OA2C OA2F OA30 OA31 OA32 OA35 OA36 OA37	0000000000000000	4020 2040 1080 0900		WAREA	DC DC DC DC			COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105 30E106 30E106 30E106 30E106 30E106 30E106 30E106
OA2A OA2B OA2C OA2C OA2F OA31 OA31 OA32 OA35 OA36 OA36 OA37	00000000000000000	4020 2040 1080 0900		WAREA	DC DC DC DC		/8010 /4020 /2040 /1080 /0900	COLUMN 1	30E105 30E105 30E105 30E105
OA2A OA2B OA2C OA2C OA2F OA31 OA32 OA33 OA35 OA36 OA37 OA38 OA38	000000000000000000000000000000000000000	4020 2040 1080 0900 0600 0600 1080 2040 4020 8010 FFF7 8880 CCCO FFF0 7777		WAREA			/8010 /4020 /2040 /1080 /0900 /0600 /0600 /0900 /1080 /2040 /4020 /4020 /5FF7 /8889 /CCCO /EEEO /FFF0	COLUMN 1	30E105 30E105 30E105 30E105 30E105 30E105 30E105 30E106 30E106 30E106 30E106 30E106 30E106 30E106 30E106 30E106 30E106
OA2A OA2B OA2C OA2C OA2F OA3D OA31 OA35 OA36 OA37 OA38 OA39 OA3A OA3B	000000000000000000000000000000000000000	4020 2040 1080 0900 0600 0900 1080 2040 4020 8010 FFF7 8880 CCCO EEE0 7777 3333		WAREA			/8010 /4020 /2040 /1080 /0900 /0600 /0600 /0900 /1080 /2040 /4020 /8010 /FFF7 /8889 /CCCO /EEEO /FFFO /7777 /3333	COLUMN 1	30E105: 30E105: 30E105: 30E105: 30E105: 30E105: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106:
OA2A OA2B OA2C OA2C OA2F OA30 OA31 OA35 OA36 OA35 OA36 OA37 OA38 OA3B OA3B	000000000000000000000000000000000000000	4020 2040 1080 0900 0600 0600 1080 2040 4020 8610 FFF7 8880 CCCO EEE0 FFF7 73333 1111		WAREA			/8010 /4020 /2040 /1080 /0900 /0600 /0600 /1080 /2040 /4020 /8010 /FFF7 /8889 /CCCO /EEEO /FFFO /7777 /3333 /1111	COLUMN 1	30E105: 30E105: 30E105: 30E105: 30E105: 30E105: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106:
OA2A OA2B OA2C OA2E OA2F OA30 OA31 OA32 OA35 OA36 OA37 OA38 OA3B OA3B OA3B	000000000000000000000000000000000000000	4020 2040 1080 0900 0600 0900 1080 2040 8010 FFF7 8880 CCCO FFF0 7777 3333 11117 A000		WAREA			/8010 /4020 /2040 /1080 /0900 /0600 /0900 /1080 /2040 /4020 /8010 /FFF7 /8889 /CCCO /FFF0 /7777 /3333 /1111 /FFF7 /A000	COLUMN 1	30E105: 30E105: 30E105: 30E105: 30E105: 30E105: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E107: 30E107: 30E107:
OA2A OA2B OA2C OA2E OA31 OA31 OA32 OA35 OA36 OA37 OA38 OA3B OA3B OA3B OA3B		4020 2040 1080 0900 0600 0900 1080 2040 4020 8010 FFF7 8880 EEE0 FFF0 7777 3333 1FFF7		WAREA			/8010 /4020 /2040 /1080 /0900 /0600 /0600 /0900 /1080 /2040 /4020 /4020 /4020 /5FF7 /8889 /CCCO /EEEO /FFF0 /7777 /3333 /1111 /FFF7 /A000 /9000	COLUMN 1	30E105: 30E105: 30E105: 30E105: 30E105: 30E105: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E107: 30E107: 30E107:
OA2A OA2B OA2C OA2C OA2F OA31 OA32 OA35 OA36 OA37 OA38 OA3B OA3B OA3B OA3B	000000000000000000000000000000000000000	4020 2040 1080 0900 0600 0900 1080 2040 4020 8010 FFF7 8880 CCCO EEE0 7777 3333 1111 FFF7 A000 8800		WAREA			/8010 /4020 /2040 /1080 /0900 /0600 /0600 /0600 /1080 /2040 /4020 /4020 /8010 /FFF7 /8889 /CCCO /EEEO /FFF0 /7777 /3333 /1111 /FFF7 /A000 /9000 /8800	COLUMN 1	30E105: 30E105: 30E105: 30E105: 30E105: 30E105: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E107: 30E107: 30E107: 30E107:
OA2A OA2B OA2C OA2C OA2F OA31 OA31 OA35 OA36 OA37 OA38 OA3A OA3B OA3C OA3C OA3C OA3C OA3C OA3C	000000000000000000000000000000000000000	4020 2040 1080 0900 0600 0900 1080 2040 4020 8010 FFF7 8880 EEE0 FFF0 7777 3333 1111 FFF7 A000 9000 88400		WAREA			/8010 /4020 /1080 /0900 /0600 /0600 /0600 /1080 /2040 /4020 /8010 /FFF7 /8882 /CCCO /EEE0 /FFF0 /FFF7 /A000 /9000 /8800 /8400	COLUMN 1 COL 21 ALPHA RIPPLE	30E105: 30E105: 30E105: 30E105: 30E105: 30E105: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107:
OA2A OA2B OA2C OA2C OA3C OA31 OA33 OA35 OA36 OA36 OA38 OA3B OA3B OA3B OA3B OA3C OA3C OA3C OA3C OA3C OA3C	000000000000000000000000000000000000000	4020 2040 1080 0900 0600 0900 1080 2040 4020 8010 FFF7 8880 EEE0 FFF0 7777 3333 1FFF7 A000 9000 8800 8400 8200		WAREA			/8010 /4020 /2040 /1080 /0900 /0600 /0900 /1080 /2040 /4020 /8010 /FFF7 /8889 /CCCO /FFF0 /7777 /3333 /1111 /FFF7 /A000 /9000 /8800 /8200	COLUMN 1	30E105: 30E105: 30E105: 30E105: 30E105: 30E105: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107:
OA2A OA2B OA2C OA2C OA2F OA31 OA33 OA35 OA36 OA37 OA38 OA3B OA3B OA3B OA3B OA3B OA3C OA3C OA3C OA3C OA3C OA3C OA3C OA3C	000000000000000000000000000000000000000	4020 2040 0900 0600 0600 0900 1080 2040 8010 FFF7 8880 CCE0 FFF0 7777 3333 11117 A000 9000 8800 8400 8400 8100		WAREA			/8010 /4020 /2040 /1080 /0900 /0600 /0600 /0900 /1080 /2040 /4020 /8010 /FFF7 /8889 /CCCO /FFF0 /7777 /3333 /1111 /FFF7 /A000 /9000 /8800 /8400 /8200 /8100	COLUMN 1 COL 21 ALPHA RIPPLE	30E105: 30E105: 30E105: 30E105: 30E105: 30E105: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107:
OA2A OA2B OA2C OA2C OA3C OA31 OA33 OA35 OA36 OA37 OA38 OA3B OA3B OA3B OA3B OA3C OA3C OA4C OA4C OA4C		4020 2040 1080 0900 0600 0900 1080 2040 4020 8010 FFF7 8880 CCEO FFF0 7777 3333 1111 A000 8800 8800 8800 8100 8080		WAREA			/8010 /4020 /2040 /1080 /0900 /0600 /0600 /0900 /1080 /2040 /4020 /4020 /4020 /EFF7 /8889 /CCCO /EEEO /FFF0 /7777 /3333 /1111 /FFF7 /A000 /9000 /8800 /8400 /8080	COLUMN 1 COL 21 ALPHA RIPPLE	30E105: 30E105: 30E105: 30E105: 30E105: 30E105: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107:
OA2A OA2B OA2C OA2C OA2C OA31 OA31 OA33 OA35 OA36 OA37 OA3B OA3B OA3C OA3C OA3C OA4C OA4C OA4C OA4C OA4C		4020 2040 0900 0600 0600 0900 1080 2040 8010 FFF7 8880 CCE0 FFF0 7777 3333 11117 A000 9000 8800 8400 8400 8100		WAREA			/8010 /4020 /2040 /1080 /0900 /0600 /0600 /0900 /1080 /2040 /4020 /8010 /FFF7 /8889 /CCCO /FFF0 /7777 /3333 /1111 /FFF7 /A000 /9000 /8800 /8400 /8200 /8100	COLUMN 1 COL 21 ALPHA RIPPLE	30E105: 30E105: 30E105: 30E105: 30E105: 30E105: 30E106: 30E106: 30E106: 30E106: 30E106: 30E106: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107: 30E107:

NTENANCE DIAGNO	STIC PROGRAM FOR	THE 1130 SY	STEM		2243550	1	IBM MAINTENANCE DIAGNOST	IC PROGRAM FOR THE 1130 SYSTEM	PART NO. 22
42 MOD 5 FUNCTI	ON TEST			PAGE	9 -	7	2501/1442 MOD 5 FUNCTION	I TEST	PAGE
				e to the second		1			1.88
			•		, 3	3			
0A47 0 8010	DC	/8010	•	30E10830	4 1	:1	0A8B 0 3333	DC /3333 DC /1111	30E1151 0 30E1152 0
0A48 9 5000 0A49 0 4800	DC DC	/5000 /4800	A STATE OF THE STA	30E10840 30E10850	:	1	0A8C 0 1111 0A8D 0 FFF7	DC /FFF7 COL 21	30E11530
0A4A 0 4400	DC .	/4400		30E10860			OABE O ACCO	DC /A000	30E11540
0A4B 0 4200	C DC	/4200		30E10870 30E10880	1	1	0A8F 0 9000	DC /9000 ALPHA RIPPLE DC /8800	30E11550 30E11560
OA4C 0 4100 OA4D 0 4080	DC DC	/4100 /4080		30E10890	•	1	0A90 0 8800 0A91 0 8400	DC /8600	30E11570
0A4E 0 4040	DC	/4040		30E10900	•		0492 0 8200	DC /8200 COL 26	30E11580
0A4F 0 4020	DC	/4020	COL 40 HAREA-30	30E10910	•	,	0A93 0 8100	DC /8100 DC /8080	30E11590 30E11600
0A50 0 4010 0A51 0 3000	DC DC	/4010 /3000	COL 40 WAREA+39	30E10920 30E10930	•		0A94 0 8080 0A95 0 8040	DC /8080 DC /8040	30E11610
0A52 0 2800	DC ·	/2800		30E10940			0A96 0 8020	CC /8020	30E11620
0A53 0 2400	DC	/2400		30E10950		1	0A97 0 8010	DC /8010	30E11630
0A54 0 2200 0A55 0 2100	DC DC	/2200 /2100	-	30E10960 30E10970	1		0A98 0 5000 0A99 0 4800	DC /5000 DC /4800	30E11640 30E11650
0A56 0 2080	. 00	/2080		30E10980			0A9A 0 4400	DC /4400	30E11660
0A57 0 2040	DC	/2040		30E10990	•		0A9B 0 4200	DC /4200	30E11670
0A58 0 2020 0A59 0 2010	- DC DC	/2020 /2010		30E11000 30E11010		-	0A9C 0 4100 0A9D 0 4080	DC /4100 DC /4080	30E11680 30E11690
0A5A 0 0000	DC 20	/0000		30E11020			0A9E 0 4040	DC /4040	30E11700
OASB O FCOO	DC	/FC00		30E11030		1 2	0A9F 0.4020	DC /4020	30E11710
0A5C 0 03F0	DC DC	/03F0 /FC00	and the second of the second	30E11040 30E11050			0AA0 0 4010 0AA1 0 300C	DC /4010 CDL 40 WAREA+39 DC /3000	30E11720 30E11730
0A5D 0 FC00 0A5E 0 03F0	DC	/03F0		30E11060		1	0AA2 0 2800	DC /2800	30E11740
0A5F 0 0000	DC	/0000		30E11070	4		OAA3 0 2400	DC /2400	30E11750
0A60 0 8887	DC	/8887		30E11080	•	1	0AA4 0 2200	DC /2200	30E11760 30E11770
0A61 0 4444 0A62 0 2222	DC DC	/44 44 /2222		30E11090 30E11100		•	0AA5 0 2100 0AA6 0 2080	DC /2100 DC /2080	30E11770
0A63 0 1111	DC	/1111		30E11110			0AA7 0 2040	DC /2040	30E11790
0A64 0 0007	OC	/0007		30E11120	. •	1	0AA8 0 2020	DC /2020	30E11800
0A65 0 8880 0A66 0 CCC4	DC DC	/8880 /CCC4		30E11130 30E11140	v .		0AA9 0 2010 0AAA 0 0000	DC /2010 DC /0000	30E11810 30E11820
OA67 O AAA2	DC	/AAA2		30E11150	e		OAAB O FCOO	DC /FC00	30E11830
0A68 0 9991	DC .	/9991		30E11160		ĺ	OAAC O O3FO	DC /03F0	30E11840
0A69 0 4444	DC	/4444		30E11170 30E11180	. 6		OAAD O FCOO OAAE O O3FO	DC /FC00 DC /03F0	30E11850 30E11860
0A6A 0 6666 0A6B 0 5555	DC	/6666 /5555		30E11190			0AAF 0 0000	DC /0000	30E11870
0A6C 0 2222	DC	/2222		30E11200			OABO 0 8887	DC /8887	30E11880
0A6D 0 3333	DC	/3333		30E11210 30E11220	•	9	OAB1 0 4444	DC /4444 DC /2222	30E11890 30E11900
0A6E 0 1111 0A6F 0 0005	DC DC	/1111 /0005	CHECK PCH TERM	30£11230			OAB2 0 2222 OAB3 0 1111	DC /2222 DC /1111	30E11910
0A70 0 0006	DC	/0006	•	30E11240	. •	D	0AB4 0 0007	DC /0007	30E11920
0A71 0 FFF7	DC	/FFF7		30E11250			OAB5 0 8880	DC /8880	30E11930
0A72 0 FFF7 0A73 0 FFF7	DC DC	/FFF 7		30E11260 30E11270	•	•	OABO CCC4	DC /CCC4 DC /AAA2	30E11940 30E11950
OA74 O FFFO	DC	/FFF0		30E11280			OAB8 0 9991	DC /9991	30E11960
0A75 0 FFF0	DC	/FFF0		30E11290			0AB9 0 4444	DC /4444	30E11970
OA76 O FFFO	DC DC	/FFF0 /FFF0	en e	30E11300 30E11310	, •		0ABA 0 6666 0ABB 0 5555	DC /6666 DC /5555	30E119 80 30E11990
0A78 0 0000	DC	/0000		30E11320	· · · · · · · · · · · · · · · · · · ·		OABC 0 2222	DC /2222	30E12000
0A79 0 8010	WARAZ DC	/8010	COL 1	30E11330	•		0ABD 0 3333	DC /3333	30E12010
0A7A 0 4020 0A7B 0 2040	Y S A DC	/4020 /2040		30E11340 30E11350			0ABE 0 1111 0ABF 0 0005	DC /1111 DC /0005 CHECK PCH TERM	30E12020 30E12030
0A7C 0 1080	DC DC	/1080		30E11360		D	0ACO 0 0006	DC /0006	30E12040
0A7D 0 0900	DC	/0900	•	30E11370			OAC1 O FFF7	DC /FFF7	30E12050
0A7E 0 0600 0A7F 0 0600	DC	/0600 /0600	Tarih da karangina da ya	30E11380 30E11390	•	a	OAC2 O FFF7	DC /FFF7	30E12060 30E12070
0A80 0 0900	DC.	/0900		30E11400		_	OACA O FFFO	DC /FFF0	30E12080
0A81 0 1080	DC.	/1080		30E11410			OAC5 O FFFO	DC /FFF0	30E12090
0A82 0 2040 0A83 0 4020	DC 7	/2040 /4020	est de la companya d	30E11420 30E11430		•	OACO FFFO	DC /FFFO	30E12100 30E12110
0A84 0 8010	DC	/8010	RANGERS (1995) Automotion (1995)	30E11440	1		0AC8 0 0000	CDL80 DC /0000	30E12110
OABS O FFF7	DC	/FFF7	あたい だいり たいしか (国際社会の) かんしょう とう (教養の姿勢) アンダー (こうしょう)	30E11450	•				30E12130
0888 0 8880	DC	/8880		30E11460 30E11470			DAC9 1 DAC8	WAREN DC COLBO	30E12140
OA87 O CCCO OA88 O EEEO	DC DC	/CCC0		30E11470 30E11480		ð		**************************	30E12150 ****** 30E12160
0A89 0 FFF0	DC	/FFF0		30E11490		-	(1 - 동안 14 - 14 - 14 - 14 - 14 - 14 - 14 - 14	* MESSAGE OUT SUBROUTINE	30E12170
0A8A 0 7777	DC.	/7777		30E11500	•	•			****** 30E12180

EC NO. 420317

M MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. 2243550 PAGE 10	IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. 2243550 Page 10A
iO1/1442 MOD 5 FUNCTION TEST		2501/1442 MOD 5 FUNCTION TEST	
	30E12190		30E12870
THIS ROUTINE HANDLES LOG AND ERROR MESSAGES. LINKAGE TO E	30E12200 _	OAFA O 5E3E ALCD DC /5E3E LAST CARD OAFB O 9A9E DC /9A9E ST	30E128 60 30E12 890
* ROUTINE VIA BSI WITH MESSAGE	NUM 30E12220	OAFC 0 211E DC /211E C OAFD 0 3E62 DC /3E62 AR	30E12900 30E12910
TIN XR1, DATA ID WORD IN XR2, ALPHA1 ADDRESS IN XR3. IF ALF	PHA2 30E12240	OAFE 0 3221 DC /3221 D	30E12920
* ADDRESS IS REQUIRES, IT MUST * SET UP IN MAINLINE.	BE 30E12250 30E12260	OAFF O FFFF DC /FFFF	30E12930 30E12940
***************************************	30E12270 + 30E12280	0800 0 7662 ANRDY DC /7662 MRDY	30E12950 30E12960
\$ 4000 PC 4000	30E12290 30E12300	OBO1 0 32A6 DC /32A6 DV OBO2 0 FFFF DC /FFFF	30E129 70 30E129 80
OACA 0 8000 K8000 DC /8000 OACB 0 0000 LNISW DC *-* FIRST LINE SWITCH	30E12310		30E12990 30E13000
OACC O OOOO ETYPE DC +-+	30E12320 30E12330	OB04 0 8636 DC /8636 VE	30E13010
OACD 0 6913 STX 1 MSGMO OACE 0 6A14 STX 2 DATID	30E12340 30E12350	0BC5 0 5E21 DC /5E21 L 0B06 0 F000 DC /F000 4	30E13020 30E13030
OACF 0 6814 STX 3 ALPHI, • OADO 1 7400 OACB MDX L LNISH,O SKIP IF FIRST LIN	30E12360	OBO7 O FFFF DC /FFFF	30E13040 30E13050
OADZ 0 7008 MDX ETYPZ BR IF 2ND LINE	30E12380	OBO8 O 5E36 ALVLO DC /5E36 LEVEL O OBO9 O B636 DC /B636 VE	30E13060 30E13070
OAD3 0 4480 0162 ETYP3 BS1 I ERROR OAD5 1 OAE1 DC MSGNO	30E12390 30E12400	OBOA 0 5E21 DC /5E21 L	30E13080 30E13090
OAD6 0 0000 REPT3 DC +-+ LOOP ADDRESS OAD7 0 1010 SLA 16 CLEAR ALPH2	30E12410 30E12420	0808 0 C400 DC /C400 0 080C 0 FFFF DC /FFFF	30E1310 0
OADS O DOOC STO ALPH2 FOR NEXT MAG OADS 1 4CSO GACC SSC 1 ETYPE	30E12430 30E12440	OBOD 0 923E ADSWE DC /923E WAS S/B DSW ERR	30E13110 30E13120
QADB 0 COO7 ETYP2 LD DATID FOR 2ND LINE	30E12450 30E12460	DC /9A21 S OBOF 0 219A DC /219A S	30E13130 30E13140
OADC O ESED OR KSOOO ADD MULT LINE BIT	30E12470 30E12480	OBIO • BCIA DC /BCIA /B OBII • 2121 DC /2121	30E13150 30E13160
OADD 0 D005 STO DATID OADE 0 1010 SLA 16	30E12490	0B12 0 329A DC /329A DS	30E13170
OADF 0 DOO4 STO ALPH1 CLEAR HEADING OAEO 0 70F2 MDX ETYP3	30E12500 30E12510	0813 0 9221 DC /9221 W 0814 0 3662 DC /3662 ER	30E13180 30E13190
*	30E12520 30E12530	0B15 0 6200 DC /6200 R 0B16 G FFFF DC /FFFF	30E13200 30E13210
* MESSAGE AREA	30E12540 30E12550	OBIT 0 2276 AINIT DC /2276 INITIALIZING	30E13220 30E13230
SOLE A GOOD MECHAD DE GOOD MESSACE NUMBER	30E12560	OB18 0 229E DC /229E IT OB19 0 223E DC /223E !A	30E13240 30E13250
OAE1 0 0000 MSGNO DC +-+ MESSAGE NUMBER OAE2 0 00E0 DC /OOE0 HEX-DEC SWITCH	30E12570 30E12580	OB1A O 5E22 DC /5E22 LI	30E13260
0AE3 0 0000 DATID DC +-+ DATA ID 0AE4 0 0000 ALPHI DC +-+ ALPHA ADDRESS 1	30E12590 30E12600	0B1B 0 A222 DC /A222 ZI 0B1C 0 7616 DC /7616 NG	30E13270 30E13260
0AE5 0 0000 ALPH2 DC +-+ ALPHA ADRESS 2 0AE6 0 0000 WASO DC +-+ DSW LEVEL 0 WAS	30E12610 30E12620	OBID 0 FFFF DC /FFFF	30E13290 30E13300
OAET 0 0000 WASA DC *-* DSW LEVEL 4 WAS OAE8 0 0000 WASI DC *-* DSW INITIALLY WAS	30E12630 30E12640	OBIE 0 923E ADTAE DC /923E WAS S/B COL DATA ERR OBIF 0 9A21 DC /9A21 S	30E13310 30E13320
OAE9 0 0000 WASD DC +-+ DATA WAS OAEA 0 0000 D2BE DC +-+ DSW SHOULD BE	30E12650 30E12660	0B20 0 219A DC /219A S 0B21 0 BC1A DC /BC1A /B	30E13330 30E13340
OAEB 0 0000 COL DC +-+ ERROR COLUMN OAEC 0 0000 WDCNT DC +-+ WDRD COUNT	30E12670 30E12680	OB22 O 2121 DC /2121 OB23 O 1E52 DC /1E52 CO	30E13350 30E13360
OAED 0 0000 COLCT DC +-+ COLUMN COUNT S/B	30E12690	● 0824 ● 5E21 DC /5E21 L	30E13370
OAEE 0 0000 MACH DC +-+ MACHINE TYPE	30E12700 30E12710	0825 0 2132 DC /2132 D 0826 0 3E9E DC /3E9E AT	30E133 80 30E1339C
OAEF O 0000 TYPE DC +-+	30E12720	OB27 0 3E21 DC /3E21 A OB28 0 3662 DC /3662 ER	30E13400 30E13410
OAFO 0 69FO STX 1 MSGNO OAF1 O 6AF1 STX 2 DATID	30E12740 30E12750	0B29 0 6221 DC /6221 R 0B2A 0 FFFF DC /FFFF	30E13420 30E13430
OAF2 0 6BF1 STX 3 ALPH1 DAF3 0 4480 0163 BSI 1 LOG	30E12760 30E12770	0828 0 9A36 ASETP DC /9A36 SET PATT IN SW 0-11	30E13440 30E13450
OAF5 1 OAE1 DC MSGNO	30E12780 • 30E12790	● 0B2C 0 9E21 DC /9E21 T	30E13460
OAF6 0 1010 SLA 16 OAF7 0 DOED STO ALPH2	30E12800	082D 0 563E DC /563E PA 082E 0 9E9E DC /9E9E TT	30E13470 30E13480
OAFS 1 4CSO DAEF BSC I TYPE	30E12810	082F 0 2122 DC /2122 I 0830 0 7621 DC /7621 N	30E13490 30E13500
**************************************		0B31 0 9A92 DC /9A92 SW 0B32 0 21C4 DC /21C4 0	30E13510 30E13520
***************************************		0833 0 84FC DC /84FC -1 0834 0 FC21 DC /FC21 1	30E13530 30E13540
	30E12880		
\TE 15JUN67 09SEP67	PROG 1D 030E-0	DATE 15JUN67 09SEP67	PROG ID 030E-0
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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PART NO. 2243550 PAGE 11 2501/1442 MOD 5 FUNCTION TEST 0835 0 9E26 /9E26 THEN TH SW 12 30E13550 0836 0 3676 DC /3676 EN 30E13560 0B37 0 219E /219E 30E13570 0838 0 7621 /7621 30E13580 0839 6 9A92 /9492 SW 30E13590 0B3A 0 21FC /21FC 30E13600 0838 0 D821 /D821 2 30E13610 DC OB3C O FFFF DC /FFFF 30E13620 30E13630 0830 0 923E ACCER DC /923E WAS S/B COL COUNT ERR 30E13640 083E 0 9A21 /9A21 S 30E13650 083F 0 219A /219A 30E13660 0840 0 BC1A /BC1A /B 30E13670 0841 0 2121 /2121 30E13680 0B42 0 1E52 /1E52 CO 30E13690 0B43 0 5E21 /5E21 30E13700 ČD DC 0844 0 1E52 /1E52 30E13710 0845 8 8276 DC /8276 UN 30E13720 DC 0B46 0 9E21 /9E21 30E13730 0847 0 3662 DC /3662 /6221 ER 30E13740 30E13750 DC. OB48 0 6221 OB49 O FFFF DC /FFFF 30E13760 30E13770 084A 0 7652 ANINT DC /7652 NO INTRPT 30E13780 30E13790 084B 8 2122 /2122 084C 0 769E DC /769E 30E13800 RP 084D 0 6256 DC 16256 30E13810 084E 0 9E21 DC /9F21 Ŧ 30E13820 DC 084F @ FFFF /FFFF 30E13830 30E13840 /5E52 0850 0 5E52 ALDMR DC LOAD AND MAKE RDY 30E13850 0851 0 3E32 /3E32 AD 30E13860 0B52 0 213E DC /213E 30E13870 0853 0 7632 /7632 ND 30E13880 0B54 0 2172 /2172 30E13890 0855 0 3E5A AK 30E13900 /3E5A DC E 30E13910 0856 0 3621 /3621 0B57 0 6232 DC 16232 RD 30E13920 DC 0B58 9 A621 /A621 Y 30E13930 0859 0 FFFF DC /FFFF 30F13940 END BGIN 30E13950 0B5A 05E8 NO ERRORS IN ABOVE ASSEMBLY

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM 2501/1442 MOD 5 FUNCTION TEST

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CROSS REFERENCE NAME VALUE REFERENCES
ACCER 083D 099A,0A20
            0672,068E,08B0,08EC
ADSWE
      OBOD
ADTAE 081E 071D,077F,0814
AINIT
      0817
            08AC,08E8
ALCD
      DAFA
            090B.093A
ALDMR
      0B50
            087F,08C1
ALPH1
      OAE4
            OACF, OADF, CAF2
ALPH2
      OAE5
            0670,068C,068C,08AE,08EA,0AD8,0AF7
      0808
ALVLO
           06 BA
      0803
            066E,06BA
ALVL4
ANINT
      OB4A
            OSBE
            0921.0950
      0800
ANRDY
ASETP
      OB2B
            0795,0706
BEGIN
      0160
            05E8
BGIN
      05E8
CHK14
      OBFC
            06D2,0746,0785,082A,0919
CHK25
      092D
            06F3,0730,073F,0750,075E,07EE,082F,083F,085C,0948
CHRDY
            0904,0925
      0911
      05FA 05F9,06B3,090F,093E
CNTRL
      05FE
CNIO
            05FC
CN20
      0605
CN30
      060B
            0600
            070C,070E,077A,080B,0995,0A1B
COL
      OAEB
COLCT
      OAED
            098E,0A14
COL80
      OACS OACS
CRDYL 0915 0927
      0927 0910
CRDYR
CHTFR
      0918 0917
DATID
      OAE3
            OACE, OADB, OADD, OAF1
DSWAN
      0650
            0644.054F
DSWEI
      089F
            0895
DSWEO
      0678
            065D,0694
DSWIA
      0630
            05ED,0630
DSH4A
      063F
            05F1,0648
DSW48
      064A
            05F5,0653
      0164
ERLCK 0166
ERROR 0162
ETYPE OACC 0674,0690,06C0,071F,0781,0816,08B2,0BEE,099C,0A22,0AD9
ETYP2 OADB
           DAD2
ETYP3
      OAD3 CAEC
EOLCC
      0696
            067E
EORTN
      0692
            0699
EOTYP
      0680
            069B
FDACD
      0622
            0906
ILO
      017A
            05EF
      018A
ILI
IL2
      019A
IL3
      DIAA
            05F3,05F7
IL4
      OIBA
INMEG OSA6
            0888
INPCH
      0877
            06C6,0744,078D,0826,0891,0897
INRDR
      0889
            06E4,072C,073D,074E,07CE,0824,083D,0853,08D3,08D9
INRST
      0886 0884
INWAT
      0888
IRDYR
      0899
            OBAB
IREAD
      062C
            085E +0A03
INTCT
      08FB
            O88A,08A6,08CC,08E2,0913,0918,0942,094A
KEFFE
      0679
            0664,0805
KFFFE
      0658 0893
      0659 06FE ,0768
KFFFO
      0656 07AE, 0801, 0986
KFFF7
K0000
      0875 0885,08F1
      0876 08A3,08DF,096B,0993,09F6
K0001
KOGOB 0657 0972
K0050 065A 0736
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2501/1442 MOD 5 FUNCTION YEST			2501/1442 MOD 5 FUNCTION TEST	
		.		#T#T - TT
K0800 0678 0661			RT2C 06F0 070B	
K1000 067A 067C		•	RT2CC 06E2 0705	•
K4003 0655 063A,0681,0684 K8000 OACA OADC			RT2CS 06E3 06EF,06F9,0706,0709 RT2D 06ED 0707	
LNISH OACH 06F1,0725,G75C,0787,07F7,081C,0ADO	•	• .	RT2DA 070C 0700	
LOG 0163 OAF3		<u> -</u>	RT2D1 0727 0718	
LOGBY 0167 LRTN 0620 0615			RT2D2 0729 0719 0719 0719 0719 0719 0719 0719 071	
MACH OAEE 087A,08BC,08FF,0930,0960,09F4		• 5	RT2F 0705 0723	
MLSCF 05E5 0610,0646,0651,06A2,06A5,07A9,07EA,0865,089B,0 MSGND 0AE1 GACD,0AD5,0AF0,0AF5	8F7,0929,0957		RT3 072C 0619 RT3A 073O 073C	•
MSGND OAEl GACD,OAD5,OAFO,OAF5 NCOL1 06D7		7	RT3A 0730 073C RT3D 072E 0738	
NCOL3 0734 072F,0735,073A			RT3E 0735	•
NCDL6 07C0 07BC,07CA NCDL7 07FB 07F5,07FC,0821			RT4 073D 061A RT4A 0746 074D	
NRTN 0619 0616			RTS 074E 061B	
02BE 0AEA 0669,0685,0712,0775,080E,08A4,08B6,08E0,08F2		7	RT5A 0756 075B RT5B 075C 076E,0785	
PBGAD 0958 0966,0992 PCHA1 06D6 06D1,06D9			RT5C 0764 076D	•
PCHST 0624 0976		: 1	RT5D 076F 076A	
PID 05DC 05EA PNCH 095D 06D4,0748,07BD,0837,0962,0967,0969,096E,0982,0	984.0980	, ,	RT5D1 0789 0777 RT5E 076C 0788	
PRTN 0984 099E	70.40700	•	RT6 078D 061C	
PUNCH 0626 0635,0636,0964,097A,097E,0990	•	• 1	RT6A 078F 07A6	
PUNEN 098C 0980 RAD 05DE 060F,06C2			RT6B 079D 07A7,07C7 RT6C 07A7 07A5	
RAREA 099F 062C,06FB,0714,074A,0756,0764,076F,07FE,0839,0	845,09F9,09FF,0A07	7 3	RT6D 07AD 07A2	
0A09,0A0E,0A12,0A17 RCHRD 0940 0935,0954			RT6E 07B1 07B4 RT6F 07B5 07C9	
RCRDY 0944 9955		I B	RT6G O7BD O7CC	
RCRYR 0955 094C			RT6H O7CA 07B9	
RCWTF 094A 0946 RDACD 09F1 06F5,0732,0741,0752,0760,07F9,0831,0841,09FD,0	A01.0A10.0A24	1 9	RT6SW 078C 0799,079F,07AD,07C4— RT7 07CE 061D	
RDACR 09F9 09FC			RT7A 07D0 07E7	
RDSWE 08DB 08D7		1	RT7B O7DE O7E8 RT7C O7E8 O7E6	
RDYER 0885 08A1 RELD 0A17 0A27		•	RT7D 07EE 07E3,0807,081A	
RENON OA18 OA28		1	RT7E 07FE 0806	
REPT3 OAD6 Rerfn OA26 OA19		• •	RT7F 0808 0803 RT7FR 0805 0820	
RID 05DD 05EC,05FE,0604,0605,0607,060B,06B1		•	RT7F1 OBIE 0810	
RIDCK 0615 OSFF		. •	RT7G 07F9 0822	
RINMS OBE2 OBF4 Rinms obcb obfo	•	• •	RT7H	
RINWA OSCA		. •	RT8 0824 061E	
RIRDY 08F5 08E4 RLCF 0168			RTBA 082A 083C RTBSA 0823 0829,082C,0836	
RQKB 01BC		I B	RT9 083D 061F	
RQTY 0188			RT9A 083F RT9B 0845 084A	
RRDYE OBF1 OBDD RTA 0853 0620		1)	RUNEN OA12 OAOB	
RTAA 085C 4873			RWATE OSCE OSES	•
RTAA1 0860 0863 RTAB 0867 0869		1	SNSWS 062E 079B,079D,07C2,07DC,07DE,0857,086A SNS1 062B 0631,0640,0886,088C,0915	
RTAC 0872 086D			SNS2- 062A- 064B,0860,08CB,08CE,0944	
RTADC 0852 0858,0867,0872 RTAPC 0851 085A,086F,0871		1 a	START 0161 0613,06A7,06AF,06B5,07AB,07EC STRT 05EB 05E3,05E4,05E5,084E	
RTASH 0850 0855,086C			SVKB 01BD	
RTNOM 0616 0608		1	SMO OSDF	
RTNSW 0165 0611 RTTBL 0617 060D,0615,0616		•	SW1 05E0 05FB,0603,06AD,084C SW2 05E1 07B7,07F0	
RT1 06C6 0617		1 3	SW3 05E2 0721,0783,0818	
RT1A 06C9 06CE RT1B 06D2 06D8,06DF			TERAD 095C 06DB,096D,0970,0974,097C,0984,0988 TYPE 0AEF 0797,07D8,0881,08C3,09OD,0923,093C,0952,0AF8	1
RT1C 06C8 06E1		• •	TYPE	
RT2 06E4 0618			WAIT1 06A0 06AB	
RT2A 06E7 06EC RT2B 06FB 0704			WAIT2 06A5 06C4	
	And the second of the second o	: 1		
DATE 15JUN67 09SEP67	PROG ID 030E-0	1	DATE 15JUN67 09SEP67	PROG 1D 030E-0
EC NO. 420317 4203178	PAGE 12		EC NO. 420317 4203178	PAGE . 12A
		3		
		5		
		1		•

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PART NO. 2243550 PAGE 2501/1442 MOD 5 FUNCTION TEST WAIT4 66AD 06A4,089D,08F9,0928,0959 WAITS 0687 06AC WARA2 GA79 06C9,06E2,06E7,0847 WAREA 0A29 0626,06CB,06CF,06E9,06ED,0758,0766,0773,0781,078F,07C5,095C WAREN DAC9 06DD WASD 0AE9 0716,0771,0809 WASI OAE8 088E,089F,08D0,08D8 MASO 0AE6 0632,0638,0682 WAS4 OAE7 0641,0640,065F,0667,0696,082D,0834,Q884,0806,0901,0932 WATFR 0880 0899 MCNT 06C5 069F,06A9 WDCNT OAEC WTCHT 0874 0791,0743,0702,07E4 XERR 0658 0638,063C,065C,0680,0693 END OF ASSEMBLY

DATE 15JUN67 09SEP67 EC NO. 420317 +203178 PROG ID 030E-0 PAGE 13

	44 A T 4. T C 1. A 4.C C	-		3505644	E0.11	T			
DP.	MAINTENANCE	• • • • • • • • • • • • • • • • • • • •	I DESNIT I I I.	PKILLERAM	FUK	IHE	1150	> T > 1	

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1627 PLOTTER FUNCTION TEST

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1627 PLCTTER FUNCTION TEST

1. PURPOSE

THE PURPOSE OF THE 1627 PLUITER DIAGNOSTIC TEST IS TO EXECUTE THE DIFFERENT MOVEMENTS OF THE PLUITER AND TO CHECK THE CABLES FOR CORRECT ADJUSTMENT.

- 2. PREREQUISITES
 - 2.1 PREGRAM PREPEQUISITES

THE 1627 PLOTTER DIAGNOSTIC PROGRAM MUST RUN UNDER CONTROL OF THE DYAGNOSTIC MONITOR.

2.2 EQUIPMENT PREREQUISITES

THE FOLLOWING EQUIPMENT IS REQUIRED.

- A. 1131 CENTRAL PROCESSING UNIT (CPU).
- B. 1627 PLOTTER POUFL 1 OR 2
- 3. USF PROCECURE
 - 3.1 LOADING

THIS PROGRAM FULLIUMS THE LLADING PROCEDURES ESTABLISHED BY THE 1130 DIAGNUSTIC "CNITOR. REFER TO U. M. DOCUMENTATION.

- 3.2 OPERATION
- 3.2.1 P.OGRAP EXECUTION
 - A. LOAD AND GU HODE

ALL ROUTINES WILL BE EXECUTED EXCEPT ROUTINE 5.
ALL DETECTED ERRORS WILL BE IDENTIFIED BY AN ERROR TYPEOUT.

B. SINGLE PRUGRAM AND UVERLAP MUDE

AFTER PROGRAM IS LOADED, THE MONITOR WILL WAIT TO ALI DY OPTIONS TO BE SPECIFIED.

- 1. SPECIFY CESTRED OFTIONS AS INSTRUCTED IN SECTION 3.2.2.
 17 NO OPTIONS ARE DESIGNED, NO ENTRY IS REQUIRED.
 ALL ROUTINES WILL BE EXECUTED EXCEPT ROUTINE 5.
 10 FXECUTE ROUTINE 5 IT MUST BE SELECTED. THEN ROUTINE 5
 AND ONLY PUUTINE 5 WILL EXECUTE.
- 2. TO START EXECUTION EXECUTE MUDE MUST BE SPECIFIED SET BIT SMITCHES FOR DESIRED MODE

SW& SETTING CUNTROL

0082 EXECUTE WITH WO OPTIGNS
0088 LOOP ON ERROR
0084 BYPASS ALL FRROR PRINTCUTS
0082 HALT ON ANY ERROR
008C LOOP ON ERROR AND BYPASS ALL ERROR
PRINTGUTS
0095 LOUP ALL PROGRAMS

0092 LOOP ALL PROGRAMS AND HALT ON ERRORS

PRESS INTERRUPT PEOUEST KEY.

02JAN66 PROG ID 0305-0 415490 PAGE 1

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1627 PLUTTER FUNCTION TEST

3.2.2 PROGRAM OPTIONS

THE OPERATOR MAY MODIFY THE EXECUTION OF THE PROGRAM ANY TIME BEFORE UR AFTER IT HAS STARTED EXECUTION BY ENTERING PROGRAM CONTROL OPTIONS OR ROUTINE SELECTION OPTIONS.

- A. PREGRAM CONTROL OPTIONS
 - 1. TO SELECT PROGRAM OPTIONS SET BIT SWITCHES AS INDICATED
 - SW. SETTING CONTROL

RESET ALL CONTROL OPTIONS C56C HALT THE 1627 PROGRAM (TO START AFTER HALT, 0501 SET SWS TO CESIRED CONTROL OPTION OR 0500. THEN PRESS INTERRUPT REQUEST KEY.) BYPASS ALL 1627 LOGS 0504 BYPASS ALL 1627 ERROR PRINTOUTS 0508 0520 SWITUCH TSOL A 4001 LOOP ROUTINE AND BYPASS ALL 1627 LOGS. 3524 LOGP ROUTINE AND BYPASS 1627 ERROR PRINTOUTS. C528

- 2. PRESS INTERRUPT REQUEST KEY.
- B. ROUTINE SFLECTION
 - 1. TO SELECT ROUTINE OPTIONS SET BIT SWITCHES AS INDICATED
 - SW. SETTING ROUTINE

ALL ROUTINES 4500 ROUTINE 1. PEN UP-DOWN TEST 4501 ROUTINE 2, REGISTRATION TEST 4502 4503 ROUTINE 3, SWING TEST ROUTINE 4, STRESS TEST (WINDMILL) 45C4 ROUTINE 5. MANUALLY SELECT COMMANDS 4505

- 2. PRESS INTERRUPT REQUEST KEY.
- C. COMMAND SELECT

ROUTINE 5 WILL LOOP ON ANY PLOTTER COMMAND, CAUSING THE PLOTTER TO MOVE IN THE DIRECTION SELECTED UNTIL A NEW COMMAND IS GIVEN. TO SET UP COMMAND SELECT-

- 1. SELECT ROUTINE 5 (4505)
- SET THE BIT SWITCHES TO 85XX, WHERE SWITCHES 8-13 SPECIFY THE DESIRED COMMAND(S) AS FOLLOWS-

2.	CUMMANU
8	PEN DOWN
9	PAPER DOWN
10	PAPER UP
11	PEN RIGHT
12	PEN LEFT

PEN UP

3. PRESS INTERRUPT REQUEST KEY.

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1627 PLUTTER FUNCTION TEST

3.3 TERMINATION

IF THERE ART NO *LOUP* CONTROL OPTIONS SELECTED, THE PROGRAM WILL TERMINATE AFTER UNE PASS. IF OPTIONS TO LOOP HAVE BEEN SELECTED. THE PRUGRAM NAY BE TERMINATED BY-

- 1. REMOVE LOOP OPTIONS AND ALLOW NORMAL TERMINATION.
- 2. SET ENTRY SWITCHES TO 4005 AND PRESS THE INTRPT REO. KEY.
- 3.4 RESTART

IO RESTART THE PROGRAM.

- 1. SET SWITCHES TU 4085.
- 2. PRESS INTERRUPT REQUEST KEY.
- 3. SET SWITCHES TO 0080.
- PRESS INTERRUPT REQUEST KEY.

DEPENDING ON HOW THE PROGRAM WAS TERMINATED. THE LAST TWO STEPS MAY NOT BE REQUIRED.

4. PRINTOUTS

ALL PRINTOUTS ARE IN THE STANDARD FORMAT.

APPIIN CORR (MESSAGE) EPPNN CORR [MESSAGE]

> WHERE A IDENTIFIES STATUS MESSAGES F IDENTIFIES ERROR MESSAGES IS THE PID OF THE PROGRAM CAUSING THE MESSAGE IS THE MESSAGE SEQUENCE NUMBER IS THE ACUTINE NUMBER MESSAGE IS ANY VARIABLE INFORMATION

STATUS MESSAGES 4.1

PLCTTER POWER IS TURNED OFF.

A0508 CORR PRUG HALT INCICATES PROGRAM HAS BEEN HALTED BY BIT SWITCH 15 FUNCTION OF BEING SET ON. SET BIT 15 OFF TO CONTINUE.

ERROR KESSAGES 4.2

E0501 OCKR BIT FAILED THIS MESSAGE INDICATES THE BUSY BIT FAILED AFTER A WRITE COMMAND.

E0502 CORR PLCTTER WAS BUSY WHEN DSW WAS SENSED.

NO INTRPT NO INTERRUPT WAS RECEIVED AFTER A WRITE COMMAND. THE PROGRAM WILL CONTINUE TO RUN.

E0507 00RK XXXX XXXX WAS S/B DSW ERRUR MODIFIERS SHOW INCORRECT DSW FOLLOWED BY CORRECT DSW. PART NO. 2191238 PAGE 3

1627 PLOTTER FUNCTION TEST

5. COMMENTS

5.1 ROUTINE 1 (PEN UP-PEN DOWN OCTAGON TEST)

THE PURPOSE OF THIS ROUTINE IS TO TEST THE CAPABILITY OF THE PLOTTER TO EXECUTE THE PEN UP AND PEN DOWN PLOTTER COMMANDS. IN THIS ROUTINE, AS IN THE OTHER PLOTTER PATTERN GENERATING ROUTINES, AN ADDRESS TABLE IS USED TO SELECT THE CURRECT PLOTTER COMMANDS. THE ADDRESS TABLE, IN TURN, POINTS TO A PAIR OF COMPUTER WORDS. UNE WORD CONTAINS A NUMBER WHICH INCICATES THE NUMBER OF TIMES THE DITHER WORD (THE PLOTTER COMMAND) IS TO BE EXECUTED.

THE PATTERN PLOTTED IN THIS FUNCTION TEST CUNTAINS TWO ADJACENT OCTAGONS, WHOSE SIDES ARE ONE AND DAE HALF INCHES IN LENGTH. OCTAGON NO. 1 (LEFTMOST OCTAGON) IS PLUTTED IN A CLOCKWISE DIRECTION. UCTAGON NO. 2 (RIGHTMOST OCTAGON) IS PLOTTED IN A COUNTER CLOCKWISE DIRECTION.

THIS ROUTINE IS DESIGNED SO THAT, IF A PEN UP COMMAND IS NOT EXECUTED AS IT SHOULD BE, A LINE WILL BE DRAWN IN THE INNER PORTION OF THE OCTAGON. IF A PEN DOWN COMMAND IS NOT EXECUTED, A SIDE OF THE OCTAGON WILL BE MISSING. FIGURE I SHOWS AN EXAMPLE OF THE OUTPUT OF THIS ROUTING.

5.2 ROUTINE 2 REGISTRATION TEST

THE FUNCTION OF THIS ROUTINE IS TO DETERMINE IF ANY ADJUSTMENTS ARE NEEDED IN THE PEN OR DRUM MOVEMENT MECHANISMS. FIGURE 2 SHOWS THE PATTERN GENERATED BY THIS ROUTINE. IF ANY OF THE LINES FAIL TO INTERSECT, SOME MECHANICAL ADJUSTMENT OF THE PLOTTER MAY BE NEEDED.

5.3 ROUTINE 3 SWING TEST

THE PURPOSE OF THIS ROUTINE IS TO TEST THE ABILITY OF THE PLOTTER TO PLOT LONG LINE SEGMENTS IN VARIOUS DIRECTIONS. THE PATTERN GENERATED BY THIS ROUTINE IS SO DESIGNED. THAT IF PLOTTER COMMANDS ARE NOT EXECUTED OR EXTRA COMMANDS ARE EXECUTED. THE CORNERS OF THE PATTERN WILL NOT JOIN. THIS TEST WILL ALSO SHOW UP ANY MALADJUSTMENT IN THE PEN OR DRUM MECHANISM.

THE PETHOD USED IN GENERATING THE PATTERN IS AS FOLLOWS.

- A. THE LIFT AND TOP SIDES OF A SERIES OF SQUARFS ARE DRAWN AS A CONTINUOUS LINE, VARYING IN SIZE FROM 10 TO 2 INCHES.
- R. THE RIGHT AND BOTTOM SIDES OF THE SERIES OF SQUARES ARE DRAWN IN ONE QUARTER INCH LINE SEGMENTS, JOINED TOGETHER, AND TOTALING THE LENGTH OF THE LEFT AND TOP SIDES.
- C. ON COMPLETING THE PLOTTING OF THE SQUARES, LINES ARE DRAWN LEGTH SECMENTED AND CONTINEOUS) THRU THE CORNERS OF THE SQUARES. ALL OF THESE DIAGONAL LINES SHOULD INTERSECT THE CURNERS OF THE SQUARES PERFECTLY.

FIGURE 3 SHOWS THE PLOTTER PATTERN GENERATED BY THIS ROUTINE.

5.4 ROUTINE 4 STRESS TEST (WINDMILL PATTERN)

THE PURPOSE OF THIS ROUTINE IS TO EXERCISE ALL OF THE MECHANICAL FUNCTIONS OF THE PLOTTER. THIS OBJECTIVE IS ACCOMPLISHED BY PLOTTING A PATTERN OF TRIANGLES, ROUGHLY RESEMBLING A WINDMILL. EACH SICE OF THE TRIANGLE CONSISTS OF A SERIES OF SMORT SAWTOOTH-LIKE SEGMENTS, WHICH TESTS THE ABILITY OF THE PLOTTER TO PLOT SHORT LINE SEGMENTS WITH ABRUPT CHANGES IN DIRECTION. A SET OF FIVE TRIANGLES

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1627 PLOTTER FUNCTION TEST

IS PLOTTED, THE AXIS IS THEN ROTATED 90 DEGREES AND FIVE MORE TRIANGLES ARE PLOTTED IN THE SAME MANNER UNTIL, FINALLY, FOUR SETS OF
TRIANCLES HAVE BEEN PLOTTED. WHEN THE TRIANGLES HAVE BEEN PLOTTED, A
LINE IS DRAWN THRU THE INNERMUST POINTS OF THE TRIANGLES. THE RESULTANT PATTERN THEN APPEARS AS A WINDMILL WITH A DIAMOND SHAPED
PATTERN CONNECTINC THE INNER POINTS OF THE TRIANGLES. THE DIAMOND
DESIGN SHOULD INTERSECT ALL OF THE INNER POINTS OF THE TRIANGLES IF
THE PLOTTER IS ADJUSTED CORRECTLY. FIGURE 4 SHOWS THE PLOTTER PATTERN GENERATED BY THE ROUTINE.

5.5 ROUTINE 5 (MANUALLY SELECTED PLOTTER COMMANDS)

TO USE ROUTINE 5 IT MUST BE SELECTED IN FUNCTION 01.

THE PURPOSE OF THIS ROUTINE IS TO PROVIDE TO THE FIFLD ENGINEER THE CAPABILITY OF EXECUTING ANY PLOTTER COMMAND HE WISH'S TO ON THE PLOTTER, BY MEANS OF ENTERING THE PLOTTER COMMAND IN THE COMMAND UNTIL IT RECEIVES ANOTHER COMMAND FROM THE OPERATORS CONSULE, OR A COMMAND UF ALL ZEROS IS RECEIVED WHICH WILL END THIS POUTINE. THE ROUTINE MAY ALSO BE DESTLECTED BY SELECTING ANOTHER ROUTINE. FOR CUMMAND SETTING REFER TO TABLE 3 SECTION 3.3.3.

6. APPENDIX

THE FOLLOWING PAGES CONTAIN THE PLOTTER OUTPUT PATTERNS.

1627 PLOTTER FUNCTION TEST

FIGURE 1

PATTERN FOR PEN UP/PEN DOWN TEST

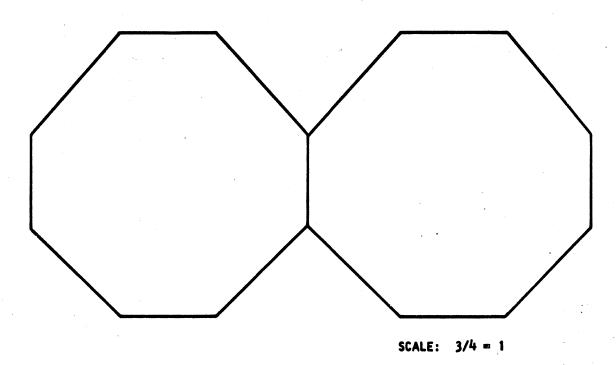
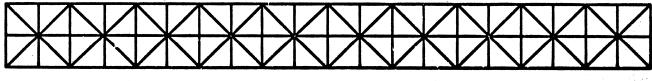


FIGURE 2

PATTERN FOR REGISTRATION TEST



SCALE: 3/4 - 1

DATE 17JAN66 EC NO. 415490 PROG ID 0305-0

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PART NO. 2191238

1627 PLOTTER FUNCTION TEST

1627 PLOTTER FUNCTION TEST

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

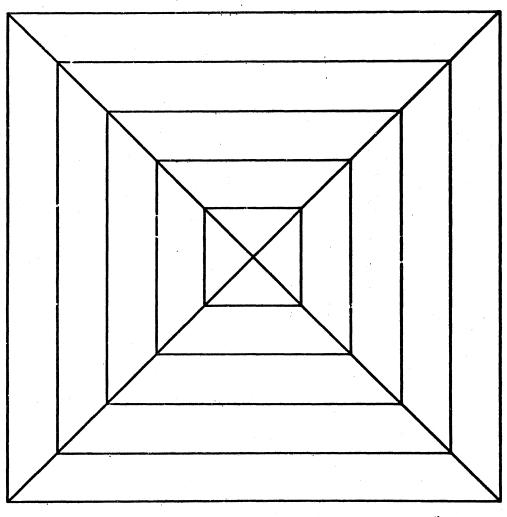
PART NO. 2191238

FIGURE 3

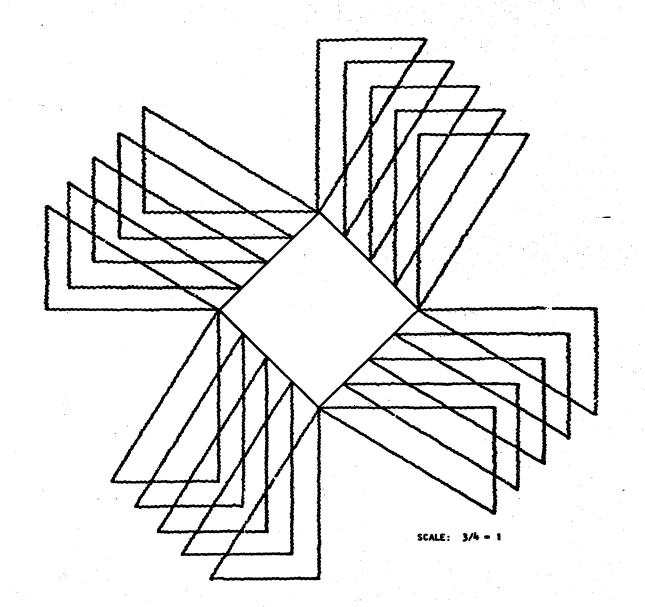
SWING TEST - PATTERN

FIGURE 4

STRESS TEST - WINDMILL PATTERN



SCALE: 3/4 - 1



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1627 PLOTTER FUNCTION TEST

1627 PLOTTER FUNCTION TEST

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PROG TRANSFER VECTOR	0000			ORG	*+1500		
	0000			ONG	441,500	PROG TRANSFER VECTOR	PL T00000
DOID SEGIN EQU 16						TROO TRANSFER VEGTOR	
START EQU START PLI00040 PLI00040 PLI00040 PLI00040 PLI00040 PLI00040 PLI00040 PLI00040 PLI00050	0010		RECIN	FOIL	16		
0012 ERROR EQU START+1 PLT00050 0013 LOG EQU ERROR+1 PLT00050 0014 HALT EQU LOG+1 PLT00050 0015 END EQU HALT+1 PLT00070 0016 LOGBY EQU END+1 PLT00070 0017 RSTKS EQU LOGBY+1 PLT00090 0018 ETRAP EQU RSTKS+1 PLT00110 0019 AQSA EQU ETRAP+1 PLT00110 0019 AQSA EQU ETRAP+1 PLT00110 0028 TIO EQU ASTKS+1 PLT00110 0029 TIO EQU ASTKS+1 PLT00110 0029 TIO EQU HALT+1 PLT00110 0029 TIO EQU HALT+1 PLT00110 0020 TIO EQU HALT+1 PLT00110 0020 TIO EQU HALT+1 PLT00110 0020 TIO EQU HALT+1 PLT00110 0021 TIO EQU HALT+1 PLT00110 0022 TIP AT EQU HALT+1 PLT00110 0023 TIP AT EQU HALT+1 PLT00110 0033 RGTY EQU HALT+1 PLT00110 0034 RQKS EQU RCKS+1 PLT00200 0035 SVKB EQU RCKS+1 PLT00200 0036 TITR EQU SVKB+1 PLT00220 0037 AEND EQU HIR*-1 PLT00220 0038 AIVO EQU ARD+4 PLT00200 0039 AIVO EQU ARD+4 PLT00200 0040 AND EQU HIR*-1 PLT00200 0040 AND EQU HIR*-1 PLT00200 0050 AIVO EQU ARD+4 SWS PLT00200 0060 ASS EQU AND+4 SWS PLT00300 0060 PLT D D C (OOO BIT SWITCH FRO PLT00400 0060 PLT00300 PLT00300 PLT00300 PLT00400 0060 PLT00300 PLT00300 PLT00300 PLT00300 0060 PLT00300 PLT00300 PLT00300 PLT00300 PLT00300 0060 PLT00300 PL							
0013					STARTAL		
MALT EQU							
0015							
0016							
DOLD	0015						
0017	0016			FOU	FND+1		_
DOTE A GOS EQU ETRAP+1 PLT00110 PLT00110 PLT00130				-			
AGSA EQU							
0028							PLT00120
11 EQU							PLT00130
11 EQU	0028		ILO	EQU	40	•	PLT00140
11.2 EUU 11.1+1 PLT00160						* 	PLT00150
11.3 EQU							PLT00160
114							PLT00170
1							PLT00180
							PLT00190
DO33		•					PLT00200
O034							PLT00210
No.							PLT00220
			_			· · · · · · · · · · · · · · · · · · ·	PLT00230
No.							
O37	0030	•			30.00		
0036	0037			FOU	T1 TR+1		
003E 0041 0041 0044 0048 0044 0048 0046 0046 0046 0046						INVI D	
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0044 0048							
NAME							
004C							
0050							
No.							
ADSCT EQU ASB+4 PLT00350							
ASCT EQU ASCT+2 SELCT PLT00360							
AMAS EQU ASCT+6 MAS						SFLCT	
# PROGRAM STARTER TABLE ************************************							
##### PROGRAM STARTER TABLE ************************************	0000			540	ASCITO	# A 3	
			*				
05DC 0 0500 PID DC			****		PROCE AM	STARTER TARIF *******	
05DC 0 0500 PID DC					PROGRAM	STARTER TABLE TOTAL	
05DD 0 0000 RID DC /0000 RDUTINE NUMBER PLT00430 05DE C 0000 B3W0 DC /0000 BIT SWITCH FNC 0 PLT00440 05DF 0 0000 BSW1 DC /0000 BIT SWITCH FNC 1 PLT00450 05EC 0 0000 BSW2 DC /0000 BIT SWITCH FNC 2 PLT00460 05E1 C 0000 BSW3 DC /0000 BIT SWITCH FNC 3 PLT00470 05E2 1 05FB ILP DC RTO INITIALIZATION ADDR PLT00480 05E3 1 0605 LPA DC GOT LOOP PROG ADDR PLT00490 05E4 0 0000 MLSCF DC /0000 IST MLSCF NORMAL PLT00500 05E5 0 0000 DC /0000 3RD MLSCF NORMAL PLT00510 05E6 0 0000 DC /0000 3RD MLSCF SBUSY PLT00510 05E6 0 0000 DC /0000 3RD MLSCF INTR CK PLT00520 05E7 0 FFFF DC /0000 3RD MLSCF INTR CK PLT00550 05E8 1 05DC DC PID PLT00550 05E8 1 05DC DC RECEV INTERRUPT ENTRY ADDR PLT00600 05EC 0 FFFF RECEV INTERRUPT ENTRY ADDR PLT00600 05EC 0 FFFF RECEV INTERRUPT ENTRY ADDR PLT00640 05EC 0 FFFF ROUTINE INTERRUPT ************************************	0500 0	0500		חר י	/0500	PROG IDENTIFICATION	
05DE C 0000 B3W0 DC /0000 BIT SWITCH FNC 0 PLT00440 05DF 0 0000 BSW1 DC /0000 BIT SWITCH FNC 1 PLT00450 05EC 0 0C00 BSW2 DC /0000 BIT SWITCH FNC 2 PLT00460 05E1 C 0C00 BSW3 DC /0000 BIT SWITCH FNC 3 PLT00470 05E2 1 05FB ILP DC RTO INITIALIZATION ADDR PLT00480 05E3 1 0605 LPA DC GOT LOOP PROG ADDR PLT00490 05E4 0 0C00 MLSCF DC /0000 IST MLSCF NORMAL PLT00500 05E5 0 0C00 DC /0G00 2ND MLSCF BUSY PLT00510 05E6 0 0000 DC /0000 3RD MLSCF INTR CK PLT00520 05E7 0 FFFF DC /FFFF TERMINATOR PLT00530 05E8 00 44800010 PLBGN BSI I BEGIN CALL TO MONITOR PLT00550 05EB 1 05ED DC RECEV INTERRUPT ENTRY ADDR PLT00650 05EC 0 FFFF ROUTINE INTERRUPT ************************************							
05DF 0 00C0 BSW1 DC							
05EC 0 0C00 BSW2 DC							
05E1 C 06C0 BSW3 DC /0000 BIT SWITCH FNC 3 PLT00470 05E2 1 05FB ILP DC RTO INITIALIZATION ADDR PLT00480 05E3 1 0605 LPA DC GOT LOOP PROG ADDR PLT00490 05E4 0 00C0 MLSCF DC /0000 1ST MLSCF NORMAL PLT00500 05E5 0 0000 DC /0000 3RD MLSCF BUSY PLT00510 05E6 0 0000 DC /0000 3RD MLSCF INTR CK PLT00520 05E7 0 FFFF DC /FFFF TERMINATOR PLT00530 + 05E8 00 44800010 PLBGN BSI I BEGIN CALL TO MONITOR PLT00560 05EA 1 05DC DC PID PLT00570 05EB 1 05ED DC RECEV INTERRUPT ENTRY ADDR PLT00600 05EC 0 FFFF RECEV PLT00650 + PLT00640 +++**********************************		and the second s					
05E2 1 05FB				-			
Note							
05E4 0 0C00 MLSCF DC /0000 1ST MLSCF NDRMAL PLT00500 05E5 0 0000 DC /0000 2ND MLSCF BUSY PLT00510 05E6 0 0000 DC /0000 3RD MLSCF INTR CK PLT00520 05E7 0 FFFF DC /FFFF TERMINATOR PLT00530 +************************************							
05E5 0 C000 DC /0G00 2ND MLSCF BUSY PLT00510 05E6 0 0000 DC /0000 3RD MLSCF INTR CK PLT00520 05E7 0 FFFF DC /FFFF TERMINATOR PLT00530 +++++++++++++ DSW TABLE ++++++++++++++++++++++++++++++++++++							
05E6 0 0000 DC /0000 3RD MLSCF INTR CK PLT00520 05E7 0 FFFF DC /FFFF TERMINATOR PLT00530 + ************************************							
05E7 0 FFFF DC /FFFF TERMINATOR PLT00530 PLT00540 *********************************							
######################################	and the second			-			
######################################	USET U	rrr	•	··	/FFFF	TERRITOR	
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# PLT00570 05E8 00 44800010 05EA 1 05DC 05EB 1 05ED 05EC 0 FFFF DC	1970年4年			~ ~ ~ ~ ~ ~	USH INDL	The second seco	
05E8 00 44800010 PLBGN BSI I BEGIN CALL TO MONITOR PLT00580 05EA 1 05DC DC PID PLT00590 05EB 1 05ED DC RECEV INTERRUPT ENTRY ADDR PLT00600 05EC 0 FFFF DC /FFFF PLT00620 + ++++++ ROUTINE INTERRUPT ************************************	4 T		-				
05EA 1 05DC DC PID PLT00590 05EB 1 05ED DC RECEV INTERRUPT ENTRY ADDR PLT00600 05EC 0 FFFF DC /FFFF PLT00610 * PLT00620 PLT00630 PLT00640 PLT00650	0550 00	44900010	PI DCM	BCT T	RECTN	CALL TO MONITOR	
05EB 1 05ED DC RECEV INTERRUPT ENTRY ADDR PLT00600 05EC 0 FFFF DC /FFFF PLT00610 * PLT00620 PLT00630 PLT00640 PLT00650						CHEE TO HORITION	
05EC 0 FFFF DC /FFFF PLT00610 * PLT00620 * PLT00630 * PLT00640 * PLT00640 * PLT00650						INTERRIPT ENTRY ADDR	
# PLT00620 # PLT00630 # PLT00640 PLT00640 ***** ROUTINE INTERRUPT ************************************					-	ANTENNOTT CHINI NOON	
# PLT00630 # PLT00640 PLT00640 ***** ROUTINE INTERRUPT ************************************	USEC U	FFFF		DC .	/		
# PLT00640 ***** ROUTINE INTERRUPT ************************************							
***** ROUTINE INTERRUPT ********* PLT00650							
DI TAALLA					BOUTTNE	TATEDDIIDT ##########	
					MUUIINE	THI CULOLI ATTACASTATA	
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PROG	ID	030	5-
DAGS			

RECEV DC /0000 PLT00670 05ED 0 0000 RETURN ADDR SE 05EE 01 0C000882 XIO L SENSE SENSE DSW PLT00680 NOP USE FOR TRAP PL F00690 05F0 0 1000 05F1 01 F400089D EOR L K8000 REMOVE SERVICE REQST PLT00700 05F3 01 D40007F1 STO L ERBIT SAVE DSW ERROR BITS **PLT00710** RECSW LDX L1 CONT PLT00720 05F5 01 6500081C GET MLSCF SET MLSCF STX L1 MLSCF PLT00730 05F7 01 6D0005E4 RETURN TO MONITOR SX PLT00740 05F9 01 4C8905ED BSC I RECEV PLT00750 **PLT00760** RETURN ADDR PLT00770 05FB 0 000C RIO DC /0000 SE LDX L1 RECEV PLT00780 05FC 01 650005ED 05FE 00 n0000028 STX L1 IL3 PLT00790 PLT00800 0600 01 660007BD LDX L2 RUNIT LD XR2 WITH RE-ENTRY SET MLSCF STX 2 MLSCF PLT00810 0602 0 6AE1 0603 01 4C8G05FB BSC I RTO RETURN TO MONITOR SX PLT00820 **PLT00830** ***** LOOP PROGRAM ADDRESS ******* PLT00840 PL T00850 0605 01 440005FB SOT BSI L RTO USE INITIALIZATION SC **PLT00860** 0607 00 40800011 BSC I START RETURN TO MONITOR PLT00870 PLT00880 **PLT00890** **** ROUTINE 1- OCTAGON PEN UP-DOWN PLT00900 PL T00910 RT1 L READY 0609 01 4400082E BSI PLT00920 PL100930 0608 01 64000698 LD L K0150 CONSTANT OF 150 060D 0 62F1 LDX 2 -15 INSTR CT EQ 1.5 INCH PLT00940 060E 01 D6000877 OCTGN STO L2 NN+15 STORE MOVE COUNT PLT00950 PLT00960 0610 0 7202 MDX 2 2 0611 0 70FC MDX OCTGN FINISH STORING COUNT PLT00970 0612 01 650008A1 LOX LI RTIST PL T00980 0614 01 6D00089E STX L1 LOOK PLT00990 0616 01 440007F2 BSI L DISP CALL DISPATCH RINE SC PLT01000 PLT01010 BUMP INSTR ADDR PNTR PLT01020 0618 01 7401089E MDX L LOOK,1 061A 01 440007F2 BSI L DISP CALL DISPATCH RINE SC PLT01030 PLT01040 061C 01 44000794 BSI L BSWCK CHECK BIT SWITCH SC PLT01050 LOAD NXT ROUTINE NO. PLT0.060 061E 0 6202 LDX 22 BSC L RTSET 061F 01 4C0007C0 GET NEXT ROUTINE PLT01070 PLT01080 PL T01090 **** ROUTINE 2- REGISTRATION TEST ** PLT01160 SC 0621 01 4400082E RT2 BSI L READY PLT01110 PLT01120 INITIALIZE INSTR CTRS 0623 00 67000064 LDX L3 100 PLT01130 TO 100, EQUAL TO 0625 01 6FC00876 STX L3 NW PLT01140 0627 01 6F000874 1 INCH OF PLTR O/P. PLT01150 STX L3 SW 0629 01 5F000868 STX L3 NN PL TO1160 PLT01170 0628 01 6F00086A STX L3 S PLT01180 062D 01 6F000870 STX L3 NE STX L3 SE PLT01190 062F 01 6F000872 0631 00 67000032 LDX L3 50 INITIALIZE INSTR CTRS PLT01200 0633 01 6F00086C STX L3 EE TO 50. EQUAL TO PLT01210 0.5 INCH OF PLTR O/P. PLT01220 0635 01 6F00086E STX L3 WW PLT01230 0637 01 650008F4 LDX L1 RT2ST STRING ADDR PL T01240 STX L1 LOOK PLT01250 0639 01 6D00089E RT TWO STRING PLT01260 0638 0 63FB LDX 3 -5 063C 01 6F000897 STX L3 EXTRA CTR STG PLT01270 063E 01 440007F2 CALL DISPATCH RINE SC PLT01280 BSI L DISP 0640 01 7401089E BUMP INSTR ADDR PNTR PLT01290 MDX L LOOK.1 LOAD 10 INCH PLOT PLT01300 0642 00 670003EB LDX L3 1000 0644 01 6F00086C STX L3 EE MOVEMENT TO EAST PLT01310 0646 01 440007F2 REGOL BSI L DISP CALL DISPATCH RINE SC PLT01320 PLT01330 0648 01 74FE089E MDX L LOOK,-2 BACK UP ADDR POINTER PLT01340

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EC NO.

1627 PLOTTER FUNCTION TEST

				W0.W					01.701.250
		74010897		MDX	L	EXTRA-1			PLT01350
064C	-	70F9		MDX		REG01			PLT01360
	-	7403089E		MDX	L	L00K•3			PLT01370
064F	-	63FB		LDX	_	-5			PLT01380
0650	01	6F0008 97		STX	L3	EXTRA			PLT0139C
			*						PLT01400
0652	01	440007F2	REG02	128	L	DISP	CALL DISPATCH RTNE	SC	PLT01410
0654	01	74FE089E		MDX	L	L00K,-2	BACK UP ADDR POINTER		PLT01420
0656	01	74010857		MDX	L	EXTRA,1			PLT01430
0658	0	70F9		MDX		REG02			PLT01440
			•						PLT01450
0659	0	63F6		LDX	3	-10	LOAD XR 3		PLT01460
	-	6F00C897		STX		EXTRA			PLT01470
		7403089E		MDX	Ĺ	LODK.3			PLT01480
	•		*		_				PLT01490
065F	C I	440007F2	REG03	RSI	L	DISP	CALL DISPATCH RTNE	SC	PLT01500
	-	74F8089E	NE 00 3	MDX	Ē	LOOK8	BACK UP ADDR POINTER	. •	PLT01510
	_	74010897		MDX	L	EXTRA-1	DAGK OF ADDK FORKIEK		PLT01520
0664		70F9		MDX	_	REGO3			PLT01530
0004	U	1019	*	HUA		REGUS			PLT01540
0//5	•	74000000	•	MOV		LOOK, 9	BUHP ADDR POINTER		PLT01550
		7409089E		MDX	L	-	BUMP ADDR POINTER		PLT01560
0667		6332		LDX		50			PLT01570
		6F00086A		STX	L3				
		670003E8		LDX		1000			PLT01580
	_	6F00086E		STX		MM			PLT01590
.066E	01	440007F2		BSI	Ŀ	DISP	CALL DISPATCH RTNE	SC	PLT01600
			•						PLT01610
		44000794		BSI	L	BSWCK	CHECK BIT SWITCH	SC	PLT01620
0672		6203		LDX		3	LOAD NXT ROUTINE NO.		PLT01630
0673	01	4C0007C0		BSC	L	RTSET	GLT NEXT ROUTINE		PLT01640
			*						PLT01650
			*						PLT01660
			****			ROUTINE 3-	SWING TEST *******		PLT01670
			*						DITOLEGO
									PLT01680
									PLT01690
		4400082E	₽ RT3	BSI	L	READY		SC	PLT01690 PLT01700
0675 0677		4400082E 6328	RT3	LDX	3	40			PLT01690 PLT01700 PLT01710
	0		* RT3		3		LINE LENGTH MODIFIED		PLT01690 PLT01700 PLT01710 PLT01720
0677 0678	0	6328	¢ RT3	LDX	3 3	40	LINE LENGTH MODIFIED		PLT01690 PLT01700 PLT01710 PLT01720 PLT01730
0677 0678 0679	0 0 00	6328 682 C	RT3	LDX STX	3 L3	40 SWNG2+1	LINE LENGTH MODIFIED		PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01740
0677 0678 0679	0 0 00 01	6328 662 C 670000 C 8	* RT3	LDX STX LDX	3 L3 L3	40 SWNG2+1 200	LINE LENGTH MODIFIED		PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01740 PLT01750
0677 0678 0679 067B 067D	0 0 00 01 0	6328 602C 670000C8 6F000868	* RT3	LDX STX LDX STX	3 L3 L3	40 SWNG2+1 200 NN	LINE LENGTH MODIFIED		PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01740 PLI01750 PLT01760
0677 0678 0679 0678 0670	0 0 00 01 0	6328 602C 670000C8 6F000868 6364	RT3	LDX STX LDX STX LDX	3 L3 L3 L3	40 SWNG2+1 200 NN 100	LINE LENGTH MODIFIED		PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01740 PLT01750 PLT01770
0677 0678 0679 067B 067D 067E 0680	0 0 09 01 0 01	6328 602C 670000C8 6F000868 6364 6F000870	* RT3	LDX STX LDX STX LDX STX	3 L3 L3 L3 3	40 SWNG2+1 200 NN 100 NE		PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01740 PLI01750 PLT01760
0677 0678 0679 0678 0670 067E 0680 0681	0 0 09 01 0 01 0	6328 662C 670000C8 6F000868 6364 6F000870 6332	RT3	LDX STX LDX STX LDX STX LDX	3 L3 L3 L3 L3 L3	40 SWNG2+1 200 NN 100 NE 50	LINE LENGTH MODIFIED	PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01740 PLT01760 PLT01770
0677 0678 0679 067B 067D 067E 0680 0681 0683	0 0 09 01 0 01 0	6328 662C 670000C8 6F000868 6364 6F000870 6332 6F00086C	* RT3	LDX STX LDX STX LDX STX LDX STX	3 L3 L3 L3 L3 L3 L1	40 SWNG2+1 200 NN 100 NE 50 EE		PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01740 PL101750 PLT01770 PLT01770 PLT01780
0677 0678 0679 0678 0670 067E 0680 0681 0683	0 0 00 01 0 01 0 01 01	6328 662C 670000C8 6F000868 6364 6F000870 6332 6F00086C 65000913	RT3	LDX STX LDX STX LDX STX LDX STX LDX	3 L3 L3 L3 L3 L3 L1	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST	LOAD ADDR STRING ADDR	PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01740 PLT01750 PLT01770 PLT01770 PLT01790
0677 0678 0679 067B 067D 067E 0680 0681 0683 0685	0 0 00 01 0 01 01 01 01	6328 602C 670000C8 6F000868 6364 6F000870 6332 6F00086C 65000913 6D00089E	RT3	LDX STX LDX STX LDX STX LDX STX LDX STX	3 L3 L3 L3 L3 L3 L1	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK	LOAD ADDR STRING ADDR	PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01750 PLT01760 PLT01770 PLT01780 PLT01780 PLT01800
0677 0678 0679 0678 0670 067E 0680 0681 0683 0685 0687	0 0 00 01 0 01 01 01 01	6328 662C 6700C0C8 6F000868 6364 6F000870 6332 6F00086C 65000913 6D00089E 440007F2	* RT3	LDX STX LDX STX LDX STX LDX STX LDX STX BSI	3 L3 L3 L3 L3 L1 L1 L1 L1	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP	LOAD ADDR STRING ADDR	PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01750 PLT01760 PLT01770 PLT01780 PLT01800 PLT01810
0677 0678 0679 0678 0670 067E 0680 0681 0683 0685 0687 0689	0 0 01 0 01 01 01 01 01	6328 662C 670000C8 6F000868 6364 6F000870 6332 6F00086C 65000913 6D00089E 440007F2 7401089E 670001F4	* RT3	LDX STX LDX STX LDX STX LDX STX LDX STX BSI MDX	3 L3 L3 L3 L3 L1 L1 L1 L1 L	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP LOOK,1	LOAD ADDR STRING ADDR	PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01750 PLT01760 PLT01770 PLT01780 PLT01800 PLT01810 PLT01830 PLT01830 PLT01840
0677 0678 0679 0678 0670 0680 0681 0685 0687 0688 0688	0 00 01 0 01 01 01 01 01 00 01	6328 662C 670000C8 6F000868 6364 6F000870 6332 6F00086C 65000913 6D00089E 440007F2 7401089E 6700C1F4 6F000876	* RT3	LDX STX LDX STX LDX STX LDX STX LDX STX BSI MDX LDX	3 13 13 13 13 11 11 1 1 13	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP LOOK,1 500 NM	LOAD ADDR STRING ADDR	PRO1	PLT01690 PLT01700 PLT01710 PLT01730 PLT01730 PLT01750 PLT01760 PLT01770 PLT01780 PLT01800 PLT01810 PLT01820 PLT01830
0677 0678 0679 067B 067D 068C 0681 0683 0685 0687 068B 068B	0 0 00 01 0 01 01 01 01 00 01	6328 662C 670000C8 6F000868 6364 6F000870 6332 6F00086C 65000913 6D00089E 440007F2 7401089E 670001F4 6F000876	* RT3	LDX STX LDX STX LDX STX LDX STX LDX STX LDX STX LDX STX STX STX	3 13 13 13 13 11 11 1 13 13	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP LOOK+1 500 NW	LOAD ADDR STRING ADDR	PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01750 PLT01760 PLT01770 PLT01780 PLT01800 PLT01810 PLT01830 PLT01830 PLT01840
0677 0678 0679 0678 0670 0680 0681 0683 0685 0687 0689 068F 068F	0 0 00 01 0 01 01 01 01 00 01 01 01	6328 662C 670000C8 6F000868 6364 6F000870 6332 6F00086C 65000913 6D00089E 440007F2 7401089E 670001F4 6F000876 6F000876	* RT3	LDX STX LDX STX LDX STX LDX STX BSI MDX LDX STX LDX STX STX	3 13 13 13 13 11 11 11 13 13 13	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP LOOK,1 500 NW	LOAD ADDR STRING ADDR	PRO1	PLT01690 PLT01710 PLT01710 PLT01720 PLT01730 PLT01750 PLT01760 PLT01770 PLT01780 PLT01890 PLT01810 PLT01820 PLT01830 PLT01840 PLT01850
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0677 0678 0679 0678 0670 0681 0683 0688 0689 0689 0699 0696 0696 0696 069C	0 0 0 01 0 01 01 01 01 01 01 01 01 01 01	6328 662C 670000C8 6F000868 6364 6F000870 6332 6F00086C 65000913 6D00089E 440007F2 7401089E 670001F4 6F000876 6F000874 6319 6F00086A 6F00086E 67000868 6F00086C 6700086C	* RT3	LDX STX LDX STX LDX STX LDX STX LDX STX STX LDX STX STX LDX STX STX LDX STX LDX	3 L3 L3 3 L3 L1 L1 L L L3 L3 L3 L3 L3 L3 L3 L3 L3 L3 L3 L3 L3	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP LOOK,1 500 NW SE SW 25 SW 1000 NN EE 5	LOAD ADDR STRING ADDR STO IN POINTER CTL WE BUMP INSTR ADDR PNTR	PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01750 PLT01760 PLT01770 PLT01780 PLT01810 PLT01810 PLT01830 PLT01830 PLT01840 PLT01850 PLT01850 PLT01850 PLT01850 PLT01860 PLT01870 PLT01880 PLT01890 PLT01910 PLT01910 PLT01920
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0677 0678 0679 0670 0670 0680 0681 0685 0687 0688 0687 0696 0696 0696 0696 0696 0697	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6328 662C 670000C8 6F000868 6364 6F000870 6332 6F00086C 65000913 6D00089E 440007F2 7401089E 6700C1F4 6F000876 6F000874 6319 6F00086A 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B	*RT3	LDX STX LDX STX LDX STX LDX STX LDX STX STX STX LDX STX STX LDX STX STX LDX STX LDX STX STX STX STX STX STX STX STX STX ST	3 13 13 13 13 13 11 11 11 12 13 13 13 13 13 13 13 13 13 13 13 13 13	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP LOOK+1 500 NW SE SW 25 S WW 1000 NN EE SS SS SS SS SS SS SS SS SS	LOAD ADDR STRING ADDR STO IN POINTER CTL WE BUMP INSTR ADDR PNTR	PRO1	PLT01690 PLT01700 PLT01710 PLT01730 PLT01730 PLT01760 PLT01770 PLT01770 PLT01780 PLT01810 PLT01810 PLT01830 PLT01840 PLT01850 PLT01860 PLT01870 PLT01870 PLT01890 PLT01900 PLT01900 PLT01930 PLT01930 PLT01930 PLT01930 PLT01930 PLT01950
0677 0678 0679 0670 0680 0681 0685 0687 0688 0687 0696 0696 0696 0696 0696 0696 0697	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6328 662C 670000C8 6F000868 6564 6F000870 6332 6F00086C 65000913 6D00089E 440007F2 7401089E 670001F4 6F000876 6F000874 6319 6F00086A 6F00086E 6700086B 6F00086B 6F00086B 6F00086B 6F00086B	* SWNG1	LDX STX LDX STX LDX STX LDX STX BSI LDX STX STX STX LDX STX STX LDX STX LDX STX STX LDX STX STX STX LDX STX STX STX STX STX STX STX STX STX ST	3 13 13 13 13 13 11 11 11 12 13 13 13 13 13 13 13 13 13 13 13 13 13	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP LOOK+1 500 NW SE SW 25 SW 1000 NN EE 5 SGRCT	LOAD ADDR STRING ADDR STO IN POINTER CTL WE BUMP INSTR ADDR PNTR	PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01750 PLT01750 PLT01760 PLT01770 PLT01780 PLT01810 PLT01810 PLT01830 PLT01840 PLT01850 PLT01850 PLT01850 PLT01860 PLT01870 PLT01980 PLT01900 PLT01910 PLT01900 PLT01910 PLT01900 PLT01930 PLT01930 PLT01950 PLT01950 PLT01950 PLT01950 PLT01970
0677 0678 0679 0670 0680 0681 0683 0685 0687 0698 0691 0693 0694 0696 0698 0696 0698	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6328 662C 670000C8 6F000868 6364 6F000870 6332 6F00086C 65000913 6D00089E 440007F2 7401089E 670001F4 6F000876 6F000874 6319 6F00086A 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B 6F00086B	•	LDX STX LDX STX LDX STX LDX STX LDX STX STX LDX STX STX LDX STX STX STX N STX N STX N STX N STX N STX N STX N N STX N N STX N N N N N N N N N N N N N N N N N N N	3 13 13 13 13 13 11 11 11 12 13 13 13 13 13 13 13 13 13 13 13 13 13	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP LOOK,1 500 NW SE SW 25 S WW 1000 NN EE 5 SQRCT 2 TRICT	LOAD ADDR STRING ADDR STO IN POINTER CTL WE BUMP INSTR ADDR PNTR	PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01750 PLT01760 PLT01770 PLT01780 PLT01810 PLT01810 PLT01840 PLT01850 PLT01850 PLT01850 PLT01860 PLT01870 PLT01890 PLT01910 PLT01900 PLT01910 PLT01920 PLT01930 PLT01930 PLT01940 PLT01950 PLT01950 PLT01970 PLT01970 PLT01970
0677 0678 0679 0678 0680 0681 0683 0688 0688 0689 0699 0699 0698 0696 0696	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6328 662C 670000C8 6F000868 65364 6F000870 6332 6F00086C 65000913 6D00089E 440007F2 7401089E 670001F4 6F000876 6F000874 6319 6F00086A 6F00086E 6700086B 6700086B 6700086B 6700086B 6700089F	* SWNGI SWNG2	LDX STX LDX STX LDX STX LDX STX LDX STX STX LDX STX N STX N STX N STX N STX N STX N STX N STX N STX N STX N STX N STX N STX N STX N STX N N N N N N N N N N N N N N N N N N N	3 13 13 13 13 13 11 11 11 13 13 13 13 13	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP LOOK,1 500 NM SE SW 25 SW 1000 NN EE 5 SQRCT	LOAD ADDR STRING ADDR STO IN POINTER CTL WE BUMP INSTR ADDR PNTR INITIALIZE SQUARE CTE	PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01750 PLT01760 PLT01770 PLT01780 PLT01810 PLT01810 PLT01830 PLT01840 PLT01850 PLT01850 PLT01860 PLT01870 PLT01890 PLT01990 PLT01900 PLT01910 PLT01920 PLT01930 PLT01930 PLT01950 PLT01950 PLT01970 PLT01980 PLT01970 PLT01980 PLT01990
0677 0678 0679 0678 0680 0681 0683 0687 0689 0689 0691 0694 0694 0695 0696 0696 0696 0696 0696 0696 0696	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6328 662C 670000C8 6F000868 65600870 6332 6F00086C 65000913 6D00089E 440007F2 7401089E 670001F4 6F000876 6F000876 6F00086A 6F00086E 670003E8 6F00086C 6305 6F00089F	* SWNG1	LDX STX LDX STX LDX STX LDX STX LDX STX STX LDX STX STX LDX STX STX LDX STX STX LDX STX STX STX LDX STX STX STX STX STX STX STX STX STX ST	3 13 13 13 13 13 11 11 11 13 13 13 13 13	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP LOOK,1 500 NW SE SW 1000 NN EE 5 SQRCT 2 TRICT 40 EXTRA DISP	LOAD ADDR STRING ADDR STO IN POINTER CTL WE BUMP INSTR ADDR PNTR INITIALIZE SQUARE CTR LINE LENGTH CTL CALL DISPATCH RINE	PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01750 PLT01760 PLT01770 PLT01780 PLT01810 PLT01810 PLT01840 PLT01850 PLT01850 PLT01850 PLT01860 PLT01870 PLT01890 PLT01910 PLT01900 PLT01910 PLT01920 PLT01930 PLT01930 PLT01940 PLT01950 PLT01950 PLT01970 PLT01970 PLT01970
0677 0678 0679 0676 0680 0681 0683 0685 0689 0688 0691 0691 0694 0696 0696 0696 0696 0696 0696 0696	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6328 662C 670000C8 6F000868 6364 6F000870 6332 6F00086C 65000913 6D00089E 440007F2 7401089E 670001F4 6F000876 6F000874 6319 6F00086A 6F00086E 670003E8 6F00086C 6305 6F00089F 6302 6F000840 67000028 6F000840 6700028 6F000840 6700028	* SWNGI SWNG2	LDX STX LDX LDX LDX LDX LDX LDX LDX LDX LDX LD	3 13 13 13 13 11 11 11 13 13 13 13 13 13	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP LOOK,1 500 NW SE SW 1000 NN EE 5 SQRCT 2 TRICT 40 EXTRA DISP LOOK,-1	LOAD ADDR STRING ADDR STO IN POINTER CTL WE BUMP INSTR ADDR PNTR INITIALIZE SQUARE CTE	PRO1	PLT01690 PLT01700 PLT01710 PLT01720 PLT01730 PLT01750 PLT01760 PLT01770 PLT01780 PLT01810 PLT01810 PLT01830 PLT01840 PLT01850 PLT01860 PLT01870 PLT01860 PLT01870 PLT01900 PLT01900 PLT01900 PLT01900 PLT01930 PLT01930 PLT01940 PLT01950 PLT01980 PLT01980 PLT01980 PLT01980 PLT01980 PLT01990 PLT01990 PLT01980 PLT01980
0677 0678 0679 0676 0680 0681 0683 0685 0689 0688 0691 0691 0694 0696 0696 0696 0696 0696 0696 0696	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6328 662C 670000C8 6F000868 65600870 6332 6F00086C 65000913 6D00089E 440007F2 7401089E 670001F4 6F000876 6F000876 6F00086A 6F00086E 670003E8 6F00086C 6305 6F00089F	* SWNGI SWNG2	LDX STX LDX STX LDX STX LDX STX LDX STX STX LDX STX STX LDX STX STX LDX STX STX LDX STX STX STX LDX STX STX STX STX STX STX STX STX STX ST	3 13 13 13 13 13 11 11 11 13 13 13 13 13	40 SWNG2+1 200 NN 100 NE 50 EE RT3ST LOOK DISP LOOK,1 500 NW SE SW 1000 NN EE 5 SQRCT 2 TRICT 40 EXTRA DISP	LOAD ADDR STRING ADDR STO IN POINTER CTL WE BUMP INSTR ADDR PNTR INITIALIZE SQUARE CTR LINE LENGTH CTL CALL DISPATCH RINE	PRO1	PLT01690 PLT01700 PLT01710 PLT01730 PLT01730 PLT01750 PLT01760 PLT01770 PLT01770 PLT01780 PLT01810 PLT01810 PLT01810 PLT01840 PLT01850 PLT01860 PLT01870 PLT01880 PLT01870 PLT01990 PLT01930 PLT01930 PLT01940 PLT01950 PLT01950 PLT01950 PLT01950 PLT01970 PLT01970 PLT01970 PLT01970 PLT01990 PLT01990 PLT01990 PLT01990 PLT01990 PLT01990 PLT01990 PLT02000 PLT02010

0445	•	7050		MDX		SWNG3	PLT NXT LINE SEGMENT		PLT02030
OGAE		70F9		MDX	L	LDOK.2			PLT02040
		7402089E 74FF08A0		MDX	Ĺ	TRICT,-1	•		PL T02050
0683	_	70F0		MDX	_	SWNG2	•		PLT02060
		74900868		MDX	L	NN100	4 - 4		PLT02070
		74900868		MDX	Ĺ	NN,-100			PLT02080
		749C086C		MDX	ī	EE,-100			PLT02090
		749C086C		MDX	ī	EE100	,		PLT02100
		74F806A5		MDX	Ē	SWNG2+1 8	ADJUST LINE LENGTH		PLT02110
06BE		1000	KEEP	NOP			MDX WILL HOP THIS		PLT02120
		440007F2		BSI	Ł	DISP	CALL DISPATCH RTNE	SC .	PLT02130
		74F7089E		MDX	L	LOOK9			PLT02140
		74FF089F		MDX	L	SQRCT,-1	REDUCE SQUARE CTR		PLT02150
0605	0	70DB		MDX		SWNG1	RE-INITIALIZE		PLT02160
06C6	01	740A089E		MDX	L	LOOK, 10	BUMP INSTR ADDR PNTR		PLT02170
06C8	00	670003E8		LDX		1000			PLT02180
O6CA	01	6F000868		STX	L3				PLT02190
06CC	01	6F00086A		STX	L3	-			PLT02200
06CE	C1	440007F2		BSI	L	DISP		sc	PLT02210
	_	7401089E		MDX	L	L00K+1	BUMP INSTR ADDR PNTR		PLT02220 PLT02230
06D2		6302		LDX	3				PLT02240
		6F0008A0		STX		TRICT			PLT02250
0605		6319		LDX		25			PLT02260
		6F000876		STX	L3				PLT02270
		6F000870	04.0	STX	L3				PLT02280
06DA	_	6314	OLD	LDX		20 Extra			PLT02290
	_	6F000897	SWNG4	STX	L	DISP	CALL DISPATCH RTNE	SC	PLT02300
		440007F2	2MMC4	MDX	Ĺ	L00K1	CALL DISPARENT KINE	J	PLT02310
		74FF089E 74FF0897		MDX	Ŀ	EXTRA,-1			PLT02320
06E3		70F9		MDX	•	SWNG4			PLT02330
0063	U	1019	*	1107		34.101			PLT02340
OAF4	01	7402089E		MDX	L	L00K+2			PLT02350
		74FF08A0		MDX	Ē	TRICT,-1			PLT02360
06E8		70F1		MDX	_	OLD			FLT02370
••••	•		*						PLT02380
06E9	01	44000794		BSI	L	BSWCK	CHECK BIT SWITCHES	SC	PLT02390
06EB		6204		LDX	2	4	LOAD NXT ROUTINE NO.		PLT02400
06EC	01	4C0007C0		BSC	L	RTSET	GET NEXT ROUTINE		PLT02410
			. *						PLT02420
			*						PLT02430
			****			ROUTINE 4-	WINDMILL DESIGN ****		PLT02440
			*				•		PLT02450
			*						DI TA244A
		4400082E		~ ~ *		05104	CHECK STATUS	s.c .	PLT02460
			RT4	BSI	L	READY	CHECK STATUS	sc	PLT02470
0612		67000164	KI4	LDX	L3	356	CHECK STATUS	sc	PLT02470 PLT02480
0151	01	6F000870	KI4	LDX STX	L3 L3	356 NE	CHECK STATUS	sc	PLT02470 PLT02480 PLT02490
	01 01	6F000870 6F000868	KIT	LDX STX STX	L3 L3 L3	356 NE NN			PLT02470 PLT02480 PLT02490 PLT02509
06F6	01 01 01	6F000870 6F000868 67000930	KIT	LDX STX STX LDX	L3 L3 L3	356 NE NN RT4ST	CHECK STATUS LD RT4 CMD STRNG ADDR		PLT02470 PLT02480 PLT02490 PLT02509 PLT02510
06F6 06F8	01 01 01 01	6F000870 6F000868 67000930 6F00089E	KI4	LDX STX STX LDX STX	L3 L3 L3 L3	356 NE NN RT4ST LOOK	LD RT4 CMD STRNG ADDR		PLT02470 PLT02480 PLT02490 PLT02509 PLT02510 PLT02520
06F6 06F8 06FA	01 01 01 01 01	6F000870 6F000868 67000930 6F00089E 440007F2	KI	LDX STX STX LDX STX BSI	L3 L3 L3 L3 L3	356 NE NN RT4ST LOOK DISP	LD RT4 CMD STRNG ADDR		PLT02470 PLT02480 PLT02490 PLT02509 PLT02510
06F6 06F8 06FA 06FC	01 01 01 01 01 01	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E	KI	LDX STX STX LDX STX BSI MDX	L3 L3 L3 L3 L3 L	356 NE NN RT4ST LOOK DISP LOOK,1	LD RT4 CMD STRNG ADDR		PLT02470 PLT02480 PLT02490 PLT02509 PLT02510 PLT02520 PLT02530
06F6 06FA 06FC 06FE	01 01 01 01 01 01	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1	KIA	LDX STX STX LDX STX BSI MDX LDX	L3 L3 L3 L3 L3 L	356 NE NN RT4ST LOOK DISP LOOK,1 -15	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR		PLT02470 PLT02480 PLT02490 PLT02500 PLT02510 PLT02520 PLT02530 PLT02540
06F6 06F8 06FA 06FC 06FE 06FF	01 01 01 01 01 01 0	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899		LDX STX STX LDX STX BSI MDX LDX LDX	L3 L3 L3 L3 L3 L L	356 NE NN RT4ST LOOK DISP LOOK+1 -15 KOOO2	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR HOVE COUNT		PLT02470 PLT02480 PLT02490 PLT02500 PLT02510 PLT02520 PLT02530 PLT02540 PLT02550
06F6 06FA 06FC 06FC 06FF 0701	01 01 01 01 01 0 01 01	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899 D6000877	WMILI	LDX STX STX LDX STX BSI MDX LDX LDX	L3 L3 L3 L3 L L L L	356 NE NN RT4ST LOOK DISP LOOK,1 -15 KO002 NN+15	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR		PLT02470 PLT02480 PLT02490 PLT02500 PLT02510 PLT02530 PLT02530 PLT02540 PLT02550 PLT02560
06F6 06F8 06FA 06FC 06FE 06FF	01 01 01 01 01 0 01 01	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899		LDX STX STX LDX STX BSI MDX LDX LDX LD	L3 L3 L3 L3 L L L L	356 NE NN RT4ST LOOK DISP LOOK+1 -15 KOOO2	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR HOVE COUNT		PLT02470 PLT02480 PLT02490 PLT02500 PLT02510 PLT02520 PLT02530 PLT02540 PLT02550 PLT02570 PLT02570 PLT02580 PLT02580 PLT02590
06F6 06F8 06FA 06FC 06FE 0701 0703 0704	01 01 01 01 01 0 01 01 0	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899 D6000877 7202		STX STX STX LDX STX BSI MDX LDX LD STD MDX MDX LDX	L3 L3 L3 L3 L L L L	356 NE NN RT4ST LOOK DISP LOOK,1 -15 K0002 NN+15	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR HOVE COUNT STORE MOVE COUNT	SC	PLT02470 PLT02480 PLT02490 PLT02500 PLT02510 PLT02530 PLT02540 PLT02550 PLT02560 PLT02580 PLT02580 PLT02580 PLT02590 PLT02590 PLT02600
06F6 06FA 06FC 06FE 06FF 0701 0703 0704	01 01 01 01 01 0 01 01 0 0	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899 D6000877 7202		STX STX LDX STX BSI MDX LDX LD STO MDX MDX	L3 L3 L3 L3 L L L L	356 NE NN RT4ST LOOK DISP LOOK,1 -15 K0002 NN+15 2	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR HOVE COUNT STORE MOVE COUNT		PLT02470 PLT02480 PLT02490 PLT02500 PLT02520 PLT02530 PLT02540 PLT02550 PLT02560 PLT02570 PLT02580 PLT02590 PLT02600 PLT02610
06F6 06FA 06FC 06FE 06FF 0701 0703 0704	01 01 01 01 01 0 01 01 0 0	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899 D6000877 7202 70FC 67000870		STX STX LDX STX BSI MDX LDX LDX LDX LDX LDX LDX MDX LDX MDX LDX STO MDX LDX BSI	L3 L3 L3 L3 L L 2 L 2 L 2 L 2 L 3 L 3 L	356 NE NN RT4ST LOOK DISP LOOK.1 -15 KO002 NN+15 2 WMIL1 NE TCNTL	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR HOVE COUNT STORE MOVE COUNT	SC	PLT02470 PLT02480 PLT02490 PLT02500 PLT02520 PLT02530 PLT02530 PLT02540 PLT02550 PLT02570 PLT02570 PLT02590 PLT02600 PLT02610 PLT02610 PLT02620
06F6 06F8 06FA 06FC 06FE 0701 0703 0704 0705 0707	01 01 01 01 01 01 01 01 01 01	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899 D6000877 7202 70FC 67000870 44000728		STX STX LDX STX BSI MDX LDX LDX LDX LDX LDX LDX STO MDX LDX LDX LDX LDX LDX LDX LDX LDX LDX L	L3 L3 L3 L3 L L 2 L 2 L 2 L 3 L 1 L 2 L 3 L 3 L 3 L 3 L 3 L 3 L 3 L 3 L 3 L 3	356 NE NN RT4ST LOOK DISP LOOK+1 -15 KO002 NN+15 2 WMIL1 NE TCNTL	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR HOVE COUNT STORE MOVE COUNT	sc sc	PLT02470 PLT02480 PLT02490 PLT02509 PLT02510 PLT02530 PLT02530 PLT02550 PLT02560 PLT02570 PLT02580 PLT02580 PLT02600 PLT02600 PLT02610 PLT02630
06F6 06F8 06FA 06FC 06FE 0701 0703 0704 0705 0707	01 01 01 01 01 01 01 01 01 01	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899 D6000877 7202 70FC 67000870 44000728	wMIL1	STX STX LDX STX BSI MDX LDX LDX LDX LDX LDX LDX MDX LDX MDX LDX STO MDX LDX BSI	L3 L3 L3 L3 L L 2 L 2 L 2 L 2 L 3 L 3 L	356 NE NN RT4ST LOOK DISP LOOK.1 -15 KO002 NN+15 2 WMIL1 NE TCNTL	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR HOVE COUNT STORE MOVE COUNT	SC	PLT02470 PLT02480 PLT02490 PLT02510 PLT02510 PLT02530 PLT02540 PLT02550 PLT02560 PLT02570 PLT02580 PLT02590 PLT02600 PLT02610 PLT02610 PLT02630 PLT02640
06F6 06F8 06FA 06FC 06FE 0701 0703 0704 0705 0707	01 01 01 01 01 01 01 0 01 01	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899 D6000877 7202 70FC 67000870 44000728		LDX STX STX LDX STX BSI MDX LDX STD MDX MDX LDX BSI LDX BSI	L3 L3 L3 L3 L4 L2 L L2 L2 L3 L3 L3 L3	356 NE NN RT4ST LOOK DISP LOOK,1 -15 KO002 NN+15 2 WMIL1 NE TCNTL	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR HOVE COUNT STORE MOVE COUNT	sc sc	PLT02470 PLT02480 PLT02490 PLT02510 PLT02510 PLT02530 PLT02540 PLT02550 PLT02570 PLT02570 PLT02580 PLT02590 PLT02600 PLT02610 PLT02630 PLT02640 PLT02640 PLT02650
06F6 06F8 06FA 06FC 06FE 0701 0703 0704 0705 0707 0709	01 01 01 01 01 0 0 01 01 01 01 01	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899 D6000877 7202 70FC 67000870 44000728 67000872 44000728	wMIL1	STX STX STX BSI MDX LDX LDX LDX LDX LDX BSI LDX BSI LDX	L3 L3 L3 L3 L4 L2 L L2 L2 L3 L3 L3	356 NE NN RT4ST LOOK DISP LOOK,1 -15 KO002 NN+15 2 WMIL1 NE TCNTL SE TCNTL	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR HOVE COUNT STORE MOVE COUNT	sc sc	PLT02470 PLT02480 PLT02490 PLT02500 PLT02510 PLT02530 PLT02540 PLT02550 PLT02560 PLT02570 PLT02580 PLT02590 PLT02600 PLT02610 PLT02620 PLT02640 PLT02640 PLT02650 PLT02660
06F6 06F8 06FA 06FC 06FE 0701 0703 0704 0705 0707 0709	01 01 01 01 01 0 0 01 01 01 01 01	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899 D6000877 7202 70FC 67000870 44000728	wMIL1 *	LDX STX STX LDX STX BSI MDX LDX STD MDX MDX LDX BSI LDX BSI	L3 L3 L3 L3 L4 L2 L L2 L2 L3 L3 L3 L3	356 NE NN RT4ST LOOK DISP LOOK,1 -15 KO002 NN+15 2 WMIL1 NE TCNTL	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR HOVE COUNT STORE MOVE COUNT	sc sc	PLT02470 PLT02480 PLT02490 PLT02500 PLT02510 PLT02530 PLT02530 PLT02540 PLT02550 PLT02580 PLT02580 PLT02580 PLT02600 PLT02610 PLT02620 PLT02640 PLT02640 PLT02640 PLT02650 PLT02650 PLT02650 PLT02650 PLT02660 PLT02670
06F6 06F8 06FA 06FC 06FE 0701 0703 0704 0705 0707 0709 070B	01 01 01 01 01 01 00 01 01 01 01 01	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899 D6000877 7202 70FC 67000870 44000728 67000872 44000728	wMIL1	LDX STX STX LDX STX BSI MDX LDX LDX MDX LDX BSI LDX BSI	L3 L3 L3 L3 L4 L2 L2 L2 L3 L3 L3 L4 L2 L2 L4 L4 L4 L4 L4 L4 L4 L4 L4 L4 L4 L4 L4	356 NE NN RT4ST LOOK DISP LOOK-1 -15 KO002 NN+15 2 WHIL1 NE TCNTL SE TCNTL SW TCNTL	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR HOVE COUNT STORE MOVE COUNT	sc sc	PLT02470 PLT02480 PLT02490 PLT02500 PLT02520 PLT02530 PLT02530 PLT02550 PLT02560 PLT02570 PLT02580 PLT02590 PLT02600 PLT02610 PLT02630 PLT02640 PLT02650 PLT02650 PLT02650 PLT02660 PLT02660 PLT02660 PLT02660 PLT02660 PLT02660 PLT02680
06F6 06F8 06FA 06FC 06FE 0701 0703 0704 0705 0707 0709 070B	01 01 01 01 01 01 01 00 01 01 01 01	6F000870 6F000868 67000930 6F00089E 440007F2 7401089E 62F1 C4000899 D6000877 7202 70FC 67000870 44000728 67000872 44000728	wMIL1 *	STX STX STX BSI MDX LDX LDX LDX LDX LDX BSI LDX BSI LDX	L3 L3 L3 L3 L4 L2 L2 L2 L3 L3 L3 L4 L2 L2 L4 L4 L4 L4 L4 L4 L4 L4 L4 L4 L4 L4 L4	356 NE NN RT4ST LOOK DISP LOOK,1 -15 KO002 NN+15 2 WMIL1 NE TCNTL SE TCNTL	LD RT4 CMD STRNG ADDR CALL DISPATCH RTNE BUMP INSTR ADDR PNTR HOVE COUNT STORE MOVE COUNT	sc sc	PLT02470 PLT02480 PLT02490 PLT02500 PLT02510 PLT02530 PLT02530 PLT02540 PLT02550 PLT02580 PLT02580 PLT02580 PLT02600 PLT02610 PLT02620 PLT02640 PLT02640 PLT02640 PLT02650 PLT02650 PLT02650 PLT02650 PLT02660 PLT02670

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

1627 PLOTTER FUNCTION TEST

DATE EC NO.

EBM MAINTENANCE DI	AGNOSTI	C PH O	GRV	M FOR THE	1130 SYSTEM		PART NO. 2191236
	HO.103111		J.,,				PAGE 3
1627 PLOTTER FUNCT	ION TES	T			•		
	*						PLT02710
0715 00 67000008		LDX		200 Nw			PLT02 720 PLT02 730
0717 01 6F070876 0719 01 6F000870		STX		NE NE			PLT02740
071B 01 6F000872		STX		SE			PL T02750
071D 01 6F000874		STX		SW			PLT02760
071F 01 74C1089E	*	MDX	L	L00K,1	BUMP INSTR ADDR PNTA	\$	PLT02 770 PLT02780
0721 01 440007F2	•	BSI	L	DISP	DRAW SQUARE	SC	PLT02790
0723 01 44000794	•	BSI	L		CHECK BIT SWITCH	SĊ	PLT02800
0725 0 6206		LDX BSC	L	6 RTSET	NEW ROUTINE GET NEXT ROUTINE		PLT0281 0 PLT028 20
0776 01 4C0007C0	*	D 3C	L	KISEI	GET NEXT ROUTINE		PL T02830
	****			TRIANGLE CO	ONTROL **********	•	PLT02840 .
	*						PLT02850
0728 0 0000 0729 01 6F000758	TCNTL		13	/0000 CHG1+1		SE	PLT028 60 PLT028 70
0728 01 6F00075F		STX		CHG2+1			PLT02880
072D 01 6F000767		STX	L3	CHG3+1			PLT02890
072F 0 6305		LDX		5	START TRIANGLE ONE		PLTC2900
0730 01 6F0008A0	*	SIX	L3	TRICT	TRIANGLE COUNT		PLT02910 PLT02920
0732 00 67000056	RUN	LDX	L3	86	START TRIANGLE		PLT02930
0734 01 6F000897		STX	L3	EXTRA			PLT02940
	*			2162	OLOT SIDE OUE	SC	PLT02950
0736 01 440007F2 0738 01 74FE089E	SIDE1	WDX R21	L		PLOT SIDE ONE	3C	PLT02960 PLT02970
073A U1 74FF0897		MDX	Ĺ	-			PLT02980
073C 0 70F9		MDX		SIDE1			PLT02990
4730 41 7/430005	*	407		1004 3			PLT03000 PLT03010
073D 01 7403089E 073F 00 6700002B		MDX LDX	L 13	L00K+3			PL103010
0741 01 6F000857		STX		EXTRA			PLT03030
	*,		_				PLT03040
0743 01 440007F2 0745 01 74FE089E	SIDE2	BSI MDX	L		PLOT SIDE TWO	SC	PLT03050 PLT03060
0747 01 74FF0897		MDX	ī				PL T03070
0749 0 70F9		MDX		SIDE2			PLT03080
A7/4 A1 7/A20A5	*	W0.4		1004 3			PLT03090
074A 01 7403089E 074C 00 67000056		MDX LDX	1.3	LOOK,3 86			PLT03100 PLT03110
074E 01 6F000897		STX		EXTRA			PLT03120
	*						PLT03130
0750 01 440007F2	SIDE3		Ŀ	DISP LOOK,-3	PLOT SIDE THREE	SC	PLT03140 PLT03150
0752 01 74FD089E 0754 01 74FF0897		MD X MD X	L	EXTRA,-1			PLT03160
0756 0 70F9		MDX	_	SIDE3			PLT03170
	*						PLT03180
0757 01 74300870 0759 01 7404089E	CHG1	MDX MDX	L	NE,48 LOOK,4			PLT03190 PLT03200
075B 01 74FF08A0		MDX	Ĺ	TRICT,-1	TRIANGLE COUNT		PLT03210
075D 0 7006		MDX		TOP			PLT03220
37EE 01 7/000076	*	MUA		NE40			PLT03230 PLT03240
075E 01 74000870 0760 01 7403089E	CHG2	MDX MDX	L	NE,-48 LODK,3			PL 103240 PL 103250
0762 01 40800728		BSC	ī	TCNTL		SX	PLT03260
and the state of the state of	*		_			-	PLT03270
0764 01 440007F2	TOP CHG3	BSI MDX	L	DISP NE,-48		SC	PLT03280 PLT03290
0766 01 74000870 0768 01 74F3089E	CHU 5	MDX	L	LDOK13			PL103290
076A 0 70C7		MDX	-	RUN	DO ANOTHER TRIANGLE		PLT03310
	*						PLT03320
	*****			POUTTNE S-	MANUAL CONTROL		PLT03330 PLT03340
	*			MOUTINE 3	MANUAL CONTINUE		PL103340
							PLT03360
0768 01 67000975	RT5			RT5ST	PLACE CNTR ADDR IN		PLT03370
076D 01 6F00089E		2 I X	LS	LOOK	O/P ROUTINE.		PLT03380

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DATE EC NO. IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PART NO. 2191236 PAGE 3A

1627 PLOTTER FUNCTION TEST

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076F 01 740005E0							
		MDX	L	35W2 • 0	CK FNC WORD 2 FOR O.		PL TO 3390
0771 0 7008		MOA		DTEA	CO TO SEL CHO. PINE		PL T03400
0777 07 //00070/		0.61		BEHER	CK DIT CH ENC 1000C		DI TO3610
0112 01 44000194		D 2 I	L	DOMUK	CK BIT SW FNC WORDS. PICK UP MLSCF ENTRY LOOP THRU MONITOR	3 C	PLT03410
0774 Ol 6700076B		LDX	L3	RT5	PICK UP MLSCF ENTRY		PLT03420
0776 01 6E0005E4		STX	1.3	MLSCE			PLT03430
0778 00 40 800011		BSC	7	START	LOOP THRU MONITOR	S.C	PLT03440
0778 00 46800011		D 3 C		SIAKI	COUP THRO MUNTIUM	30	
	*			•			PLT03450
077A Cl 5700077A	RT5A	LDX	L3	RT5A	MODIFY RETURN ADDR FOR INTERRUPT RTNE.		PLT03460
077C 01 650005E6		CTY	12	DEC CHAI	FOR INTERRUPT RINE.		PLT03470
0770 01 07000370		3.7		UCO3H-I	THE WAR & CONTAINS		DL T03410
077E 01 C40005E0		LU	r	RZMS	FNC WRD 2 CONTAINS		PL103480
0780 0 1802		SRA		2			PLT03490
0.781 0 1004		SIA		10	•		PLT03500
0781 0 100A 0782 01 D400087F		CTO		10 SBSW2			
0782 01 0400087F		210	L	282MS			PLT03510
0784 01 442007F2 0786 01 6700081C		BSI	L	DISP,Z	TEST FOR END OF RTNE RESTORE RETURN ADDR. CK BIT SW FNC WORDS.	SC	PLT03520
0786 01 67000810		1 DX	13	CONT			PLT03530
0700 01 01000010		CTY		DECCHAI	DESTORE RETURN ADDR		PLT03540
0788 01 6FC005F6		314	LO	KEC2M4T	RESTURE RETURN ADDR.		PL 103340
078A 01 44000794		BSI	L	BSWCK	CK BIT SW FNC WORDS.	SC	PL T03550
	*						PLT03560
078C 01 C40005DE	PTOVE			BCHO	LOAD FNC WORD ZERO. TEST LOOP PROG. FNC.		PLT03570
0786 01 64000308	KIUVK	LU	L	D3#U	EUAD FNC WORD ZERUS		
078E 0 100B		SLA		11 RUNIT++Z END	TEST LOOP PROG. FNC.		PLT03580
070E 01 4C2007D0		B SC	L	RUNIT.+Z			PLT03590
0791 CO 44800015 0793 1 05DC		ACT.	7	END	GO TO MONITOR END	S.C	PLT03600
0791 00 44800019		D 2 f		CNU .	GO TO MUNITUR END	36	
0793 1 05DC		DC		PID			PLT03610
	*						PLT03620
				*******	**************		PLT03630
					. *		PLT03640
	*****	*		COMMON SUB	ROUTINES *******		PLT03650
							PLT03660
	•						
	₹ .				•		PLT03670
	****			ROUTINE 811	SWITCH CHECK *****		PLT03680
	•						PLT03690
0794 0 0000	BSWCK	DC		/ 000 0	RETURN ADDRESS	SE	PLT03700
0795 01 C40005DE	FNCO	LD	L	BSWO	LD FNC WORD O. B 15 ON, BCH TO STOP		PLT03710
0797 01 40040740		B SC	ī	STOD. E	A 15 ON. ACH TO STOP		PL:03720
0171 01 400401AD		030	-	310716	5 13 0M 5CH 10 310F		
0799 0 100A		SLA		10			PLT03730
0704 01 (6000744		220	1	RI DOP.+7	BR IF LOOP RTNE.		PLT03740
U/YA U1 4L28U/AA		D 3 C			Dr II FOO! VINE		1 2 1 0 3 1 7 0
079A 01 4C2807AA		BSC	_	MEGGI VIE	DK II LOOF KINES		
	*						PLT03750
079C 01 C40005DF							PLT03750
079C 01 C40005DF 079E 01 4C980794	FNC 1	LN BSC	L I	BSW1 BSWCK++	LD FNC WORD 1. BCH ON ZERO	sx	PLT03750
079C 01 C40005DF 079E 01 4C980794	FNC 1	LN BSC	L I	BSW1 BSWCK++	LD FNC WORD 1. BCH ON ZERO	sx	PLT03750 PLT03760 PLT03770
079C 01 C40005DF 079E 01 4C980794	FNC 1	LN BSC	L I	BSW1 BSWCK++	LD FNC WORD 1. BCH ON ZERO	sx	PLT03750 PLT03760 PLT03770 PLT03780
079C 01 C40005DF 079E 01 4C980794	FNC 1	LN BSC	L I	BSW1 BSWCK++	LD FNC WORD 1. BCH ON ZERO	sx	PLT03750 PLT03760 PLT03770 PLT03780 PLT03790
079C 01 C40005DF 079E 01 4C980794	FNC1	LD BSC AND STO LDX	L I L L	BSWI BSWCK++- KOOO7 RID RID	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT	sx	PLT03750 PLT03760 PLT03770 PLT03780
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD	FNC1	LD BSC AND STO LDX	L I L L	BSWI BSWCK++- KOOO7 RID RID	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT	sx	PLT03750 PLT03760 PLT03770 PLT03780 PLT03790 PLT03800
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD	FNC1	LD BSC AND STO LDX	L I L L	BSWI BSWCK++- KOOO7 RID RID	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT	sx	PLT03750 PLT03760 PLT03770 PLT03780 PLT03790 PLT03800 PLT03810
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF	FNC1	LD BSC AND STO LDX	L I L L	BSWI BSWCK++- KOOO7 RID RID	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT	sx	PLT03750 PLT03760 PLT03770 PLT03780 PLT03790 PLT03800 PLT03810 PLT03820
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD	FNC1	LD BSC AND STO LDX	L I L L	BSW1 BSWCK++	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT	sx	PLT03750 PLT03760 PLT03770 PLT03780 PLT03790 PLT03800 PLT03810
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018	FNC1	LD BSC AND STO LDX	L I L L	BSWI BSWCK++- KOOO7 RID RID	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT	sx	PLT03750 PLT03760 PLT03770 PLT03780 PLT03790 PLT03800 PLT03810 PLT03820
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF	FNC 1	LD BSC AND STO LDX	L I L L	BSWI BSWCK++- KOOO7 RID RID	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT	sx	PLT03750 PLT03760 PLT03770 PLT03780 PLT03790 PLT03800 PLT03810 PLT03820 PLT03830 PLT03840
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018	FNC1 * *	LD BSC AND STO LDX SLA STO MDX	L I L I2 L	BSW1 BSWCK++- KOOO7 RID RID 16 BSW1 RERUN	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT RESET BSW1 TO ZERO.	SX	PLT03750 PLT03760 PLT03770 PLT03780 PLT03790 PLT03810 PLT03810 PLT03820 PLT03830 PLT03840 PLT03850
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018	FNC 1	LD BSC AND STO LDX SLA STO MDX	L I L I2 L	BSW1 BSWCK++- KOOO7 RID RID 16 BSW1 RERUN	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT	SX	PLT03750 PLT03760 PLT03770 PLT03780 PLT03890 PLT03810 PLT03820 PLT03820 PLT03840 PLT03850 PLT03860
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018	FNC1 * *	LD BSC AND STO LDX SLA STO MDX	L I L I2 L	BSW1 BSWCK++- KOOO7 RID RID 16 BSW1 RERUN	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT RESET BSW1 TO ZERO.	SX	PLT03750 PLT03760 PLT03770 PLT03780 PLT03790 PLT03810 PLT03820 PLT03830 PLT03840 PLT03850 PLT03860 PLT03860 PLT03870
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079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018 07AA 01 668005DD 07AC 0 7015 07AD 01 CC000390 07AF 01 4400084A 07B1 01 670007B7 07B3 01 6F0005E4 07B5 00 4C800011 07B7 01 C40005DE 07B9 01 4C0407B1 07BB 01 4C800794 07BD 01 44000794 07BF 0 6201	* * *RLOOP * STOP HLTSW NOGO * * RUNIT	LDX SLA STO MDX LDX MDX LDX MDX LDD BSI LDX BSC LD BSC BSC BSI LDX	L I I L L L L L L L L L L L L L L L L L	BSW1 BSWCK++- KOOO7 RID RID 16 BSW1 RERUN RID RERUN MHALT TYPE NUGO MLSCF START BSWO HLTSW+E BSWCK /OOO1	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT RESET BSW1 TO ZERO. GET LAST ROUTINE NUM MSG- PROG HALT USE TYPE ROUTINE LGAD RETURN ADDR STORE IN MLSCF RETURN TO MONITOR LOAD BIT SW WRD ZERO BCH BIT 15 ON RETURN TO PROG CHECK BIT SWITCHES LD RT1 ID AND STORE	SC SC SX	PLT03750 PLT03760 PLT03770 PLT03770 PLT03890 PLT03890 PLT03810 PLT03820 PLT03830 PLT03850 PLT03860 PLT03860 PLT03890 PLT03990 PLT03910 PLT03910 PLT03920 PLT03940 PLT03950 PLT03950 PLT03960 PLT03970 PLT03980 PLT03990 PLT03990 PLT03990 PLT03990 PLT03990
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018 07AA 01 668005DD 07AC 0 7015 07AD 01 CC000390 07AF 01 4400084A 07B1 01 670007B7 07B3 01 6F0005E4 07B5 00 4C800011 07B7 01 C40005DE 07B9 01 4C0407B1 07BB 01 4C800794 07BC 01 44000794 07BF 0 6201 07C0 01 6E0005DD	* * RLOOP * STOP HLTSW NOGO * RUNIT LORTI RTSET	LDX STO HDX STO MDX LDX MDX LDX MDX LDD BSI IDX STX BSC LD BSC BSC	L I I L L L L L L L L L L L L L L L L L	BSW1 BSWCK++- KOOO7 RID RID 16 BSW1 RERUN RID RERUN MHALT TYPE NOGO MLSCF START BSWO HLTSW,E BSWCK /OOO1 RID	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT RESET BSW1 TO ZERO. GET LAST ROUTINE NUM MSG- PROG HALT USE TYPE ROUTINE LDAD RETURN ADDR STORE IN MLSCF RETURN TO MONITOR LOAD BIT SW WRD ZERO BCH BIT 15 ON RETURN TO PROG CHECK BIT SWITCHES LD RT1 ID AND STORE STORE ROUTINE NUMBER	SC SC SX	PLT03750 PLT03760 PLT03770 PLT03770 PLT03770 PLT03800 PLT03810 PLT03820 PLT03830 PLT03850 PLT03850 PLT03860 PLT03890 PLT03990 PLT03910 PLT03920 PLT03930 PLT03950 PLT03950 PLT03960 PLT03970 PLT03970 PLT03980 PLT03980 PLT03990 PLT03990 PLT03990 PLT03990 PLT03990 PLT04000 PLT04010
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018 07AA 01 668005DD 07AC 0 7015 07AD 01 CC000390 07AF 01 4400084A 07B1 01 670007B7 07B3 01 6F0005E4 07B5 00 4C800011 07B7 01 C40005DE 07B9 01 4C0407B1 07BB 01 4C800794 07BD 01 44000794 07BF 0 6201	* * *RLOOP * STOP HLTSW NOGO * * RUNIT	LDX STO HDX STO MDX LDX MDX LDX MDX LDD BSI IDX STX BSC LD BSC BSC	L I I L L L L L L L L L L L L L L L L L	BSW1 BSWCK++- KOOO7 RID RID 16 BSW1 RERUN RID RERUN MHALT TYPE NUGO MLSCF START BSWO HLTSW+E BSWCK /OOO1	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT RESET BSW1 TO ZERO. GET LAST ROUTINE NUM MSG- PROG HALT USE TYPE ROUTINE LGAD RETURN ADDR STORE IN MLSCF RETURN TO MONITOR LOAD BIT SW WRD ZERO BCH BIT 15 ON RETURN TO PROG CHECK BIT SWITCHES LD RT1 ID AND STORE	SC SC SX	PLT03750 PLT03760 PLT03770 PLT03770 PLT03890 PLT03890 PLT03810 PLT03820 PLT03830 PLT03850 PLT03860 PLT03860 PLT03890 PLT03990 PLT03910 PLT03910 PLT03920 PLT03940 PLT03950 PLT03950 PLT03960 PLT03970 PLT03980 PLT03990 PLT03990 PLT03990 PLT03990 PLT03990
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018 07AA 01 668005DD 07AC 0 7015 07AD 01 CC000990 07AF 01 4400084A 07B1 01 670007B7 07B3 01 6F0005E4 07B5 00 4C800011 07B7 01 C40005DE 07B9 01 4C0407B1 07BB 01 4C800794 07BD 01 44000794 07BF 0 6201 07C0 01 6E0005DD 07C2 01 C60007C8	* * RLOOP * STOP HLTSW NOGO * RUNIT LORTI RTSET	LDX STO HDX STO HDX STO HDX STO HDX	L I I L I I L 2 L L L 2 L L L 2 L L L 2 L	BSW1 BSWCK,+- KOOO7 RID RID 16 BSW1 RERUN RID RERUN MHALT TYPE NUGO MLSCF START BSWO HLTSW,E BSWCK /OOO1 RID RTABL	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LOAD XR 2 INDERCT RESET BSW1 TO ZERO. GET LAST ROUTINE NUM MSG- PROG HALT USE TYPE ROUTINE LOAD RETURN ADDR STORE IN MLSCF RETURN TO MONITOR LOAD BIT SW WRD ZERO BCH BIT 15 ON RETURN TO PROG CHECK BIT SWITCHES LD RT1 ID AND STORE STORE ROUTINE NUMBER GET ROUTINE ADDR AND	SC SC SX	PLT03750 PLT03760 PLT03760 PLT03770 PLT03780 PLT03880 PLT03810 PLT03820 PLT03830 PLT03850 PLT03860 PLT03870 PLT03890 PLT03990 PLT03920 PLT03930 PLT03930 PLT03940 PLT03950 PLT03950 PLT03970 PLT03970 PLT03970 PLT03990 PLT03990 PLT03990 PLT03990 PLT03990 PLT03990 PLT03990 PLT03990 PLT03990 PLT03990 PLT03990 PLT03990 PLT03990 PLT04000 PLT04010 PLT04020
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018 O7AA 01 668005DD 07AC 0 7015 O7AD 01 CC000990 07AF 01 4400084A 07B1 01 670007B7 07B3 01 6F0005E4 07B5 00 4C800011 07B7 01 C40005DE 07B9 01 4C0407B1 07BB 01 4C800794 C7BD 01 44000794 07BF 0 6201 07C0 01 6E0005DD 07C2 01 C60007C8 07C4 01 D40005E4	* * RLOOP * STOP HLTSW NOGO * RUNIT LORTI RTSET	LD BSC LDX STA BSC LDX BSC LDX STX BSC LD CSTX BSC LDX STX BSC LDX STX LDX STX LDX STX LDX STX LDX STX LDX STX LD STD	LILLI2 L LL3 LL L L 2 LL2 L	BSW1 BSWCK++- KOOO7 RID RID 16 BSW1 RERUN RID RERUN MHALT TYPE NOGO MLSCF START BSWO HLTSW,E BSWCK /OOO1 RID RTABL MLSCF	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT RESET BSW1 TO ZERO. GET LAST ROUTINE NUM MSG- PROG HALT USE TYPE ROUTINE LGAD RETURN ADDR STORE IN MLSCF RETURN TO MONITOR LOAD BIT SW WRD ZERO BCH BIT 15 ON RETURN TO PROG CHECK BIT SWITCHES LD RT1 ID AND STORE STORE ROUTINE NUMBER GET ROUTINE ADDR AND SET MLSCF	SC SC SX SC	PLT03750 PLT03760 PLT03770 PLT03770 PLT03800 PLT03810 PLT03820 PLT03820 PLT03840 PLT03850 PLT03860 PLT03870 PLT03890 PLT03990 PLT03910 PLT03920 PLT03950 PLT03950 PLT03950 PLT03950 PLT03950 PLT03950 PLT03960 PLT04030
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018 07AA 01 668005DD 07AC 0 7015 07AD 01 CC000990 07AF 01 4400084A 07B1 01 670007B7 07B3 01 6F0005E4 07B5 00 4C800011 07B7 01 C40005DE 07B9 01 4C0407B1 07BB 01 4C800794 07BD 01 44000794 07BF 0 6201 07C0 01 6E0005DD 07C2 01 C60007C8	* * RLOOP * STOP HLTSW NOGO * * RUNIT LORTI RTSET RERUN	LD AND STO LDX SLA STO MDX LDX MDX LDX MDX LDX BSI LDX STX BSC LD BSC LD BSC BSC BSC BSC BSC		BSW1 BSWCK++- KOOO7 RID RID 16 BSW1 RERUN RID RERUN MHALT TYPE NOGO MLSCF START BSWO HLTSW,E BSWCK /OOO1 RID RTABL MLSCF START	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT RESET BSW1 TO ZERO. GET LAST ROUTINE NUM MSG- PROG HALT USE TYPE ROUTINE LGAD RETURN ADDR STORE IN MLSCF RETURN TO MONITOR LOAD BIT SW WRD ZERO BCH BIT 15 ON RETURN TO PROG CHECK BIT SWITCHES LD RT1 ID AND STORE STORE ROUTINE NUMBER GET ROUTINE ADDR AND SET MLSCF RETURN TO MONITOR	SC SC SC SC	PLT03750 PLT03760 PLT03770 PLT03770 PLT03890 PLT03890 PLT03830 PLT03830 PLT03850 PLT03850 PLT03860 PLT03870 PLT03890 PLT03990 PLT03910 PLT03910 PLT03930 PLT03940 PLT03950 PLT03950 PLT03950 PLT03950 PLT03960 PLT03970 PLT03990 PLT03990 PLT03990 PLT03990 PLT03970 PLT03980 PLT03990 PLT040400 PLT040400 PLT04020 PLT04030 PLT04040
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018 O7AA 01 668005DD 07AC 0 7015 O7AD 01 CC000990 07AF 01 4400084A 07B1 01 670007B7 07B3 01 6F0005E4 07B5 00 4C800011 07B7 01 C40005DE 07B9 01 4C0407B1 07BB 01 4C800794 C7BD 01 44000794 07BF 0 6201 07C0 01 6E0005DD 07C2 01 C60007C8 07C4 01 D40005E4	* * RLOOP * STOP HLTSW NOGO * * RUNIT LORTI RTSET RERUN	LD AND STO LDX SLA STO MDX LDX MDX LDX MDX LDX BSI LDX STX BSC LD BSC LD BSC BSC BSC BSC BSC		BSW1 BSWCK++- KOOO7 RID RID 16 BSW1 RERUN RID RERUN MHALT TYPE NOGO MLSCF START BSWO HLTSW,E BSWCK /OOO1 RID RTABL MLSCF START	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT RESET BSW1 TO ZERO. GET LAST ROUTINE NUM MSG- PROG HALT USE TYPE ROUTINE LGAD RETURN ADDR STORE IN MLSCF RETURN TO MONITOR LOAD BIT SW WRD ZERO BCH BIT 15 ON RETURN TO PROG CHECK BIT SWITCHES LD RT1 ID AND STORE STORE ROUTINE NUMBER GET ROUTINE ADDR AND SET MLSCF	SC SC SC SC	PLT03750 PLT03760 PLT03770 PLT03770 PLT03800 PLT03810 PLT03820 PLT03820 PLT03840 PLT03850 PLT03860 PLT03870 PLT03890 PLT03990 PLT03910 PLT03920 PLT03950 PLT03950 PLT03950 PLT03950 PLT03950 PLT03950 PLT03960 PLT04030
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018 O7AA 01 668005DD 07AC 0 7015 O7AD 01 CC000990 07AF 01 4400084A 07B1 01 670007B7 07B3 01 6F0005E4 07B5 00 4C800011 07B7 01 C40005DE 07B9 01 4C0407B1 07BB 01 4C800794 C7BD 01 44000794 07BF 0 6201 07C0 01 6E0005DD 07C2 01 C60007C8 07C4 01 D40005E4	* * RLOOP * STOP HLTSW NOGO * * RUNIT LORTI RTSET RERUN	LD AND STO LDX SLA STO MDX LDX MDX LDX MDX LDX BSI LDX STX BSC LD BSC LD BSC BSC BSC BSC BSC		BSW1 BSWCK++- KOOO7 RID RID 16 BSW1 RERUN RID RERUN MHALT TYPE NOGO MLSCF START BSWO HLTSW,E BSWCK /OOO1 RID RTABL MLSCF START	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT RESET BSW1 TO ZERO. GET LAST ROUTINE NUM MSG- PROG HALT USE TYPE ROUTINE LGAD RETURN ADDR STORE IN MLSCF RETURN TO MONITOR LOAD BIT SW WRD ZERO BCH BIT 15 ON RETURN TO PROG CHECK BIT SWITCHES LD RT1 ID AND STORE STORE ROUTINE NUMBER GET ROUTINE ADDR AND SET MLSCF RETURN TO MONITOR	SC SC SC SC	PLT03750 PLT03760 PLT03770 PLT03770 PLT03890 PLT03890 PLT03810 PLT03830 PLT03850 PLT03850 PLT03860 PLT03870 PLT03890 PLT03990 PLT03910 PLT03910 PLT03930 PLT03950 PLT03950 PLT03960 PLT03960 PLT03960 PLT03970 PLT03970 PLT03980 PLT03990 PLT03990 PLT03990 PLT03980 PLT03990 PLT04010 PLT04010 PLT04010 PLT04010 PLT04020 PLT04030 PLT04050
079C 01 C40005DF 079E 01 4C980794 07A0 01 E400089A 07A2 01 D40005DD 07A4 01 668005DD 07A6 0 1010 07A7 01 D40005DF 07A9 0 7018 O7AA 01 668005DD 07AC 0 7015 O7AD 01 CC000990 07AF 01 4400084A 07B1 01 670007B7 07B3 01 6F0005E4 07B5 00 4C800011 07B7 01 C40005DE 07B9 01 4C0407B1 07BB 01 4C800794 C7BD 01 44000794 07BF 0 6201 07C0 01 6E0005DD 07C2 01 C60007C8 07C4 01 D40005E4	* * RLOOP * STOP HLTSW NOGO * RUNIT LORTI RTSET RERUN	LD AND STO LDX SLA STO MDX LDX MDX LDX MDX LDX BSI LDX STX BSC LD BSC LD BSC BSC BSC BSC BSC		BSW1 BSWCK++- KOOO7 RID RID 16 BSW1 RERUN RID RERUN MHALT TYPE NOGO MLSCF START BSWO HLTSW,E BSWCK /OOO1 RID RTABL MLSCF START	LD FNC WORD 1. BCH ON ZERO SAVE ROUTINE NUMBER STORE ROUTINE NUMBER LDAD XR 2 INDERCT RESET BSW1 TO ZERO. GET LAST ROUTINE NUM MSG- PROG HALT USE TYPE ROUTINE LGAD RETURN ADDR STORE IN MLSCF RETURN TO MONITOR LOAD BIT SW WRD ZERO BCH BIT 15 ON RETURN TO PROG CHECK BIT SWITCHES LD RT1 ID AND STORE STORE ROUTINE NUMBER GET ROUTINE ADDR AND SET MLSCF RETURN TO MONITOR	SC SC SC SC	PLT03750 PLT03760 PLT03770 PLT03770 PLT03890 PLT03890 PLT03830 PLT03830 PLT03850 PLT03850 PLT03860 PLT03870 PLT03890 PLT03990 PLT03910 PLT03910 PLT03930 PLT03940 PLT03950 PLT03950 PLT03950 PLT03950 PLT03960 PLT03970 PLT03990 PLT03990 PLT03990 PLT03990 PLT03970 PLT03980 PLT03990 PLT040400 PLT040400 PLT04020 PLT04030 PLT04040

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1627 PLOTTER FUNCTION TEST

1627 PLOTTER FUNCTION TEST

			*			ROUTINE	ADDRESS TABLE	*	PLT04070
			*					*	PLT04080
			*					*	PL T04090
			*****	****	***	******	. * * * * * * * * * * * * * * * * * * *	*	PLT04100
									PLT04110
7C8 1		078F	RTABL	DC		LDRT1	LOOP PROG TEST		PLT04120
709 1		0609		DC	,	RT1	PEN UP-DOWN OCTAGON		PLT04130
7CA 1		0621		DC		RT2	REGISTRATION TEST		PLT04140
				DC		RT3	SWING TEST		PLT04150
7CB 1		0675		DC		RT4	WINDMILL TEST		PLT04160
7CC 1		06EE		DC		RT5	MANUAL CMD SELECTION	!	PLT04170
7CD 1		0768		-			TEST LOOP PROG.		PLT04170
7CE 1		078C	_	DC		RTOVR	TEST EUUP PRUG.		PLT04190
			*						
			****			20117745			PLT04200
			*****			KUUTINE	BUSY ************		PLT04210
									PLT04220
			*						PLT04230
7CF 0		0000	BUSY	DC		/0000	RETURN ADDR	SE	PLT04240
	_	CC000886		L DD	L	MBUSY	MSG- BUSY		PLT04250
		44000 7D6		BSI	L	ERR1	USE ERROR ROUTINE	SC	PLT04260
7D4 0	1	4C8007CF		BSC	I	BUSY	TURN TO PROGRAM	SX	PLT04270
			*						PLT04280
			*						PLT04290
			****			ROUTINE	ERROR TYPE OUT ******	:	PLT04300
									PLT04310
		• 1	*						PLT04320
D6 0		0000	ERR1	DC		/0000	RETURN ADDR	SE	PLTG4330
07 0		0616	-	STD		ERMSG	SET ERROR MSG		PLT04340
		C40005DE	•	LD	L	BSWO	LD BIT SW ZERO		PLT04350
DA C		100C		SLA	_	12	TEST FOR BYPASS ERMS	G	PLT04360
		4CA807D6		BSC	1	ERR1,+Z	BYPASS ON MINUS		PLT04370
00 0	•	1020000	*	030	•				PLT04380
0 00	n	44800012	ERBSY	ACT	1	ERROR	CALL MONITOR ERROR	SC	PLT04390
DF 1		07EC	CKD31	DC	•	ERRXX	MESSAGE LOCATION		PLT04400
-				DC		REPT1	BUSY ADDR		PLT04410
E0 1		07E5		DC		REPT1	. ERROR ADDR		PLT04420
F1 1		07E5					. ERRUR AUDR		.PLT04430
	-	658007D6		LDX	1 1	ERRI			PLT04440
E4 0	١.	7002		MDX		REPT1+2	•		PLT04450
			55555			C0064	•		PL T04460
	_	650007DD	REPTI			ERBSY			
	-	600005E4		STX		MLSCF			PLT04470
E9 0	0	4C800011		BSC	1	START		SC	PLT04480
			*		_	_			PLT04490
EC		0000		BSS	E	0	11000 COLET		PLT04500
EC 0		0001	ERRXX			/0001	HORD COUNT		PLT04510
ED O		00:00		DC		/0000	HEX CONTROL		PLT04520
EE 0		0000	ERMSG			/0000	MSG NUMBER		PLT04530
EF 0		0000		DC		/0000	ALPHA 1		PLT04540
FO 0)	0000		DC		/0000	ALPHA 2		PLT04550
F1 0)	0000	ERBIT	DC		/0000	BITS IN ERROR		PLT04560
			4						PLT04570
			•						PLT04580
			****			ROUTINE	DISPATCH ***********		F'LT04590
			*						PLT04600
									PLT04610
F2 0)	0000	DISP	DC		/0000	RETURN ADDR	SE	PLT04620
		6580089E	NEXT	LDX	11	LOOK	RESTORE XR 1		PLT04630
		6D00089E		STX		LOOK	SAVE XR 1		PLT04640
	-	CD800000		LDD	īi		GET COUNT + DIRECTIO	IN	PLT04650
		DL000894		STD	į.	COUNT	<u> </u>	-	PLT04660
. 7 0	•	DC000074		310	_	555/11			PLT04670
ED ^	1	4000757	-	BSC	1	DISP,+-	RETRN TO PROG ON ZER	n sx	PLT04680
		4C9807F2	DI OT		-		MOVE COMMAND	J.	PLT04690
		00000892	PLOT	XIO	Ļ	MARK	SENSE DSW		PLT04700
	_	00000880		XIO	L	SENT			PLT04710
	-	F4000899		EOR	Ļ	K0002	CHECK BUSY		
-		4C i 8080B		BSC	ŗ	TIME +-	BCH ON ZERO		PLT04720
0 60				CYO	L	ERBIT	SAVE ERROR BITS		PL104730
03 0 05 0	1	D40007F1 CC000884		STO	Ĺ	MBITE	MSG- BIT FAILED		PLT04740

								Marin Garage
0809 01	440007D6		BSI	L	ERR1	USE ERROR ROUTINE	SC	PLT04750
000, 0	44000100	*	53.	_				PLT04760
0808 00	65000700	TIME	LDX	LI	/0700	TIMING CONSTANT		PLT04770
080D 01	60000896		STX	Ll	CONST			PLT04780
	65000815	YGCH	LDX		HOP	GET MLSCF		PLT04790
	6D0005E6		STX		MLSCF+2	SET MLSCF		PLT04800
0813 00	40800011		BSC	I	START	RETURN TO MONITOR	SC	PLT04810 : PLT04820
0015 01	7/55000/	* HBP	MDX	L	CONST1	REDUCE TIMER		PLT04830
0817 G	74FF0896 70F7	nur	MOX	L	HOPY	KI:DOCE TINEK		PLT04840
	CCOOOBBA		LDD	L	MNINT	MSG- NO INTERRUPT		PLT04850
	44000706		BSI	Ē	ERR1	USE ERROR ROUTINE	SC	PLT04860
		*						PLT04870
0810 01	00000880	CONT	XIO	L	SENT			PLT04880
081E 0	1801		SRA	_	1	ACC DIEM DOUTTHE		PL T04890
	440407CF		BSI	Ļ	BUSY,E	USE BUSY ROUTINE	SC	PLT04900 PLT04910
0821 01	74FF()894 70D9		MDX MDX	L	COUNT,-1 PLOT	REDUCE COUNT		PLT04920
	7401089E		MDX	L	LOOK,1	BUMP INSTR ADDR PNTR	•	PLT04930
0826 0	70CC		MDX	•	NEXT			PLT04940
••••		*						PLT04950
		*			•			PLTG4960
		****			ROUTINE NOT	READY *********		PLT04970
		*						PLT04980
		*	20		10000	0.5711041 4.000	c =	PLT04990 PLT05000
0827 0	0000	NRDY	DC LDD	L	/0000 MNRDY	RETURN ADDR MSG- NOT READY	SE	PLT05010
	L CC00088C L 4400084A		BSI	Ĺ	TYPE	USE TYPE ROUTINE	SC	PLT05020
	4C800827		BSC	ī	NRDY	RETURN TO PROGRAM	SX	PLT05030
		*		_				PLT05040
								PLT05050
		****			ROUTINE STA	ATUS CHECK *******		PLT05060
		*						PLT05070
-	0000	# DEADY	00		10000	DETURN ADDR	SE	PLT05080 PLT05090
082E 0	0000 0000882	READY	XIO	L	/0000 SENSE	RETURN ADDR SENSE DSW	36	PLT05100
	D40007F1		STO	Ē	ERBIT	SAVE DSW		PLT05110
0833 01			BSI	ī	NRDY, E	BCH IF BIT 15 ON	SC	PLT05120
	C40007F1		LD	Ĺ	ERBIT			PLT05130
0837 0	1801		SRA		1			PLT05140
0838 01	440407CF		BSI	L	BUSY, E	BCH IF BIT 14 ON	SC	PLT05150
		*				201 522 2176		PLT05160
	C40007F1		LD AND	L	ERBIT K4003	DSW ERR BITS CONSTANT		PLT05170 PLT05180
	442007D6		BSI	L	ERR1.Z	BCH ON BITS	SC	PLT05190
,	00000882	NOT	XIO	Ĺ	SENSE	SENSE DSW	-	PLT05200
	4C98082E		BSC	ī	READY,+-	RETURN TO PROG ON O	SX	PLT05210
0844 01	65000840		LDX	L1	NOT	GET MLSCF		PLT05220
	6D0005E4		STX		MLSCF	SET MLSCF		PL T05230
0848 00	40800011		BSC	I	START	RETURN TO MONITOR	SC	PLT05240
		*			BOUTTHE TH			PLT05250 PLT05260
		*			KOUITHE 14	PE ***********		PLT05280
084A C	0000	TYPE	DC		/0000	RETURN ADDR	SE	PLT05280
084B 0		• • • • •	STD		MSG	MSG AND NUMBER	-	PLT05290
	C40005DE		LD	L	BSWO	BIT SW STG		PLT05300
084E 0	1000		SLA		13	TEST FOR BYPASS LOG		PLT05310
084F 01	4CA8084A		B SC	I	TYPE ++Z	BCH ON MINUS	SX	PLT05320
		*						PLT05330
	44800013	LUCAC		I	LOG	CALL MONITOR LOG	SC	PLT05340
0853 .1	0862 085C		DC DC		LOGM LOGB	ADDR OF MSG BUSY ADDR		PLT05350 PLT05360
0854 1 0855 0	0000		DC		2000	DUST MUUR		PLT05370
	6580084A		LDX	11	TYPE	GET MLSCF		PLT05380
	6D0005E4		STX		MLSCF	SET MLSCF		PL T05390
			0.00			OCTUDAL TO MONTTOO	S.C.	PLT05400
	4C800G11		BSC	1	START	RETURN TO MONITOR	3 C	
	4C800G11 65000851	+ LOGB	FDX		LOGAG	KETOKN TO HUNITUK	36	PLT05410 PLT05420

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1627 PLOTTER FUNCTION TEST

085E	01	6D0005E5		STX	Ll	MLSCF+1			PLT05430
0860	00	40800011		BSC	I	START		SC	PLT05440
			*						PLT05450
0862		0000		BSS	E	0			PLT05460
0862	e	0000	LOGM	DC		/0000	WORD COUNT		PL T05470
0863	C	00:00		DC		/ 000 0	HEX		PLT05480
0864		0000	MSG	DC		/0000	MESSAGE NUMBER		PLT05490
0865		0000	-	DC		/0000	ALPHA 1		PLT05500
0866		0000		DC		/0000	2		PLT05510
••••	•		****		***		*************		PLT05520
			*				•		PLT05530
			****			STORAGE AR	EA **********		PLT05540
			*						PLT05550
			*						PLT05560
0868		0000		BSS	Ε	0			PLT05570
0868	0	0000	NN	DC	-	/0000	MOVE COUNT		PLT05580
0869		4000		DC		/4000	DIRECTION		PLT05590
086A	Č	0000	S	DC		/0000			PLT05600
0868	Ö	2000	•	DC		/2000			PLT05610
	-	0000	EE	DC		/0000			PLT05620
0860		1000		DC		/1000	•		PLT05630
086E		0000	WW	DC		/0000			PLT05640
086F		0800	••••	DC		/0800			PLT05650
0870		0000	NE	DC		/0000			PLT05660
0871	ò	5000		oc oc		/5000			PLT05670
	-	0000	SE	DC		/0000			PLT05680
0873		3000		DC		/3000			PLT05690
0874		0000	SW	DC		/0000			PLT05700
0875		2800	J.,	DC		/2800			PLT05710
0876		0000	NW	DC		/0000			PLT05720
0877	-	4800		DC		/4800			PLT05730
0878		0001	PENUP			/0001			PLT05740
0879		0400		DC		/0400			PLT05750
087A	ŏ	0001	PENDW.			/0001			PLT05760
0879	Ò	8000		DC		/8000			PLT05770
	_	044C	LEFT	DC		1100	•		PLT05780
0870		C800		DC		/0800			PLT05790
087E	ō	1100	BSWCT	DC		/1100	CMD EXECUTE CNTR		PLT05800
087F	ì	05E0	SBSW2			BSW2	PLOT CMD STORAGE.		PLT05810
0880	-	0000	SENT	DC		/0000	SENSE DSW		PLT05820
0881		2F00		DC		/2F00			PLT05830
. 0882		0000	SENSE	DC		/0000	SENSE DSW + RESET		PLT05840
0883		2F01		DC		/2F01			PLT05850
0884		0001	MBITE	DC		1	MESSAGE NUMBER		PLT05860
		0977		DC		ABITE	MSG- BIT FAILED		PLT05870
0886	Ō	0002	MBUSY	DC		2	MESSAGE NUMBER		PLT05880
0887	1	0982		DC		ABUSY	MSG- BUSY		PLT05890
8880	-	0003	MEND	DC		3	MESSAGE NUMBER		PL T05900
0889		0037		DC		AEND	MSG- END OF TEST		PLT05910
0884	-	0004	MNINT			4	MESSAGE NUMBER		PLT05920
0888		0041		DC		ANINT	MSG- NO INTERRUPT		PLT05930
088C	_	0005	MNRDY			5	MESSAGE NUMBER		PLT05940
C88D		0048		DC		ANRDY	MSG- NOT READY		PLT05950
088E		0007	MWASB			7	MESSAGE NUMBER		PLT05960
088F	1	0987		DC		AWASB	MSG- WAS S/B		PLT05970
0890		0008	MHALT	DC		8	MESSAGE NUMBER		PLT05980
0891	1	098F		DC		AHALT	MSG- PROG HALT		PLT05990
		- 18 July 1	*						PLT06000
0892	1	0895	MARK	DC		COMAD	DIRECTION COMMAND		PLT06010
0893		29.0		DC		/2900			PLT06020
0894		0000	COUNT	DC		/0000			PLT06030
0895		0000	COMAD	DC		/0000			PLT06040
0896		0000	CONST			/0000			PLT06050
0897		0000	EXTRA			/0000			PLT06060
0898		0000	K0000			/0000	ZERO CONSTANT		PLT06070
0899		000?	K0002	DC		/0002			PLT06080
089A		0007	K0007	DC		/0007			PLT06090
087B		0096	K0150			150	CONSTANT		PLT06100

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,						
0890 0	BFFC	K4003	חר	/BFFC	CONSTANT	PLT06110
		K8000		/8000		PLT06120
0890 0	8000 0000	LOOK	DC	/0000	START OF STRING	PLT06130
089E 0	0000	SORCT		/0000	START OF STREET	PLT06140
089F 0	0000	TRICT		/000	TRIANGLE COUNT	PLT06150
UBAU U	0000	*		7000	***************************************	PLT06160
						PLT06170
08A1 1	0878	RT1ST	DC	PENUP		PLT06180
08A2 1	087C		DC	LEFT		PLT06190
08A3 1	0870		DC	NE		PLT06200
08A4 1	087A		DC	PENDW	START OCTAGON NO. 1	PLT06210
08A5 1	0868		DC	NN	1A	PLT06220
08A6 1	0878	• .	DC	PENUP	. •	PLT06230
08A7 1	086C		DC	EE	•	PLT06240
08AB 1	0870		DC	NE		PLT06250
08A9 1	0874		DC	PENDM		PLT06260
OBAA 1	0872		DC	SE	2A	PLT06270 PLT06280
08AB 1	0878		DC DC	PENUP Sw		PLT06280
08AC 1 08AD 1	0874 086 A		DC	S		PLT06300
08AE 1	087A		DC	PENDW		PLT06310
08AF 1	086E		DC	MM	3A	PLT06320
08B0 1	0878		DC	PENUP		PLT06330
08B1 1	0868		DC	NN		PLT06340
08B2 1	0876		DC	NW		PLT06350
08B3 1	087A		DC	PENDW		PLT06360
08B4 1	0870		DC	NE	44	PLT06370
08B5 1	0878		DC	PENUP		PLT06380
08B6 1	0872		DC	SE		PLT06390
0887 1	086C		DC	EE		PLT06400
0888 1	087A		DC DC	PENDW S	5A	PLT06410 PLT06420
0889 1 0884 1	086A 0878		DC	9 PENU P	3 A	PLT06430
088B 1	086E		DC	MM		PLT06440
08BC 1	0874		DC	SW		PLT06450
08BD 1	087A		DC	PENDW		PLT06460
08BE 1	0876		DC	NW	6 A	PLT06470
08BF 1	0878		DC	PENUP		PLT06480
08CO 1	0870		DC	NE		PLT06490
08C1 1	0868	4	DC	NN -		PLT06500
08C2 1	087A		DC	PENDW		PLT06510
08C3 1	086C		DC	EE	7A	PLT06520
08C4 1	0878		בכ	PENUP		PLT06530
08C5 1 08C6 1	086 4 0872		DC DC	S SE		PLT06540 PLT06550
08C7 1	087A		DC	PENDW		PLT06560
08C8 1	0874		DC	SW	'8A	PLT06570
0809 1	0878		DC	PENUP		PLT06580
OBCA 1	0860		DC	EE		PLT06590
08CB 1	0898		DC	K0000	•	PLT06600
08CC 1	086C		DC	EE		PLT06610
08CD 1	.0874		DC	PENDW	START OCTAGON NO. 2	PLT06620
08CE 1	086C		DC	EE	18	PLT06630
08CF 1	0878		DC	PENUP		PLT06640
08D0 1	0868		DC	NN		PL T06650
08D1 1	0870		DC	NE	20	PLT06660
08D2 1 08D3 1	087A 087 6		DC DC	PENDW NW	28	PLT06670 PLT06680
08D4 1	0878		DC	PENUP		PLT06690
08D5 1	0874		DC.	SW		PLT06700
08D6 1	086E		DC	WW		PLT06710
08D7 1	087A		DC	PENDW	3B	PLT06720
08D8 1	086A		DC	\$		PLT06730
08D9 1	0878		DC	PENUP		PLT06740
08DA 1	086C		DC	EE		PLT06750
08DB 1	0872		DC	SE		PLT06760
08DC 1	087A		DC	PENDW	4B	PLT06770
08DD 1	0870		DC	NE .		PLT06780

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1627 PL	DTTER FUNCT	ION TEST					·	:
2225 1	0.70	ne.	ocullo		0. 70/700			_
08DE 1	0978	DC	PENUP		PLT06790			Ş
08DF 1 08EC 1	0876 0868	DC DC	NW NN		PLT06800 PLT06810			
08E1 1	0874	DC	PENDW	58	PLT06820		·	_
08E2 1	086£	DC	WW		PLT06830			_
08E3 1	0878	DC	PENUP		PLT06840			
08E4 1	086A	DC	\$		PLT06850			<u>.</u>
08E5 1	0874	DC DC	SW Pendw	6B	PLT06860 PLT06870			
08E6 1 08E7 1	087 A 0872	DC	SE	00	PLT06880			~
08E8 1	0878	DC	PENUP		PLT06890			
08E9 1	0870	DC	NE		PLT06900			
08EA 1	086C	90	EE		PLT06910			-
08EB 1	097A	D C	PENDW	78	PLT06920			
08EC 1 08ED 1	0868 0878	DC DC	NN PENUP		PLT06930 PLT06940	•		
08EE 1	086E	DC	MM		PLT06950			
08EF 1	0876	DC	NW		PLT06960			
08F0 1	087A	DC	PENDW	88	PLT06970			•
08F1 1	0874	D C	SW		PLT06980			
08F2 1	0878	DC DC	PENUP	END OF ROUTINE	PLT06990 PLT07000			
08F3 1	0898	.	K0000	END OF KOUTTNE	PLT07010			
08F4 1	0878	RT2ST DC	PENUP		PLT07020			
08F5 1	087C	ЭC	LEFT	FUT PEN AT LEFT MARGIN	PLT07030			
08F6 1	0870	DC	NE	POSITION PEN FOR START	PLT07040			
08F7 1	8880	DC	NN		PLT07050	•.		
08F8 1	086E	D C	MM		PLT07060			
08F9 1 08FA 1	0899 C87A	DC DC	KOOOO Pendw	•	PLT07070 PLT07080			
08FB 1	086 C	DC	EE	MOVE 10 INCHES EAST	PLT07090			
98FC 1	0876	DC	NW	PLOT SAWTOOTH PATTERN	PLT07100			
08FD 1	0874	DC	SW	FROM EAST TO WEST	PLT07110			
08FE 1	0898	DC .	K0000	REPEAT FIVE TIMES	PLT07120			
08FF 1	0868	DC	NN	DE OF CAUTOOTH BATTERN	PLT07130			
0900 1 0901 1	0872 0870	DC DC	SE NE	PLOT SAHTOOTH PATTERN FROM WEST TO EAST	PLT07140 PLT07150			
0902 1	0898	DC	K0000	TRUM WEST TO EAST	PLT07160			
0903 1	086A	DC	S	PLOT PERPENDICULAR	PLT07170			
0904 1	0878	DC	PENUP	LINES, JOINING THE	PLT07180			•
0905 1	086E	DC	MM	POINTS OF EACH	PLT07190			
0906 1	087A	DC	PENDW	SANTOOTH.	PLT07200			
0907 1 0908 1	0868 0878	DC DC	NN PENU P	•	PLT072 10 PLT072 20			
0909 1	086E	DC	MM		PLT07230			
090A 1	087A	DC	PENDW		PLT07240			
090B 1	0898	DC	K0000	RPT ABOVE SEQ 10 TIMES	PLT07250			
090C 1	086C	DC	EE	PLOT TOP OF PATTERN	PLT07260			
090D 1 090E 1	0878 086A	DC DC	PENUP S		PLT07270 PLT07280			
090E 1	087A	DC	5 PENDW		PLT07290			
0910 1	086E	DC	MM	PLOT LINE THRU CENTER	PLT07300			
0911 1	0878	DC	PENUP	OF PATTERN	PLT07310			
0912 .	0898	DC	K0000	END OF ROUTINE	PLT07320			
		*			PLT07330			•
0913 1	0878	RT3ST DC	PENUP	RAISE PEN Put pen at left margin	PLT07340 PLT07350			
0914 1 0915 1	087C 086C	DC DC	LEFT EE	POSITION PEN TO START	PLT07360			
0916 1	0868	DC	NN	SWING TEST PATTERN.	PLT07370			
0917.1	0898	DC	коооо		PLT07380			
0918 1	0874	DC	PENDW		PLT07390			•
0919 1	0868	DC	NN	PLOT LEFT SIDE OF SQ.	PL107400			
0914 1	086C	DC	EE	PLOT TOP OF SQUARE. PLOT 1/4 INCH SEGMENT	PLTC7410 PLT07420			
0918 1 0916 1	086A 0898	DC DC	S K0000	FLUI 1/4 INCH SEGMENT	PLT07430	•		
091D 1	086E	DC	MM	PLOT 1/4 INCH SEGMENT	PLT07440			
091E 1	0898	DC	K0000		PLT07450			-
091F 1	0878	DC	PENUP	POSITION PEN FOR NEXT	PLT07460			
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1627 PLC	TTER FUNCTI	ON TEST			
0920 1	0870	DC	NE	SMALLER SQUARE.	PLT07470
0921 1	0898	DC	K0000		PLT07480
0922 1	087A	DC	PENDW	PLOT DIAGONAL LINES	PLT07490
0923 1	0872	DC	SE	THRU THE SET OF	PLT07500
0924 1	0878	DC	PENUP	SQUARES AND FINISH	PL107510
0925 1	0868	DC	NN	THE SWING TEST.	PLT07520
0926 1	087A	DC	PENDW		PLT07530
0927 1	0874	DC	SW		PLT07540
0928 1	0898	DC	K0000	•	PLT07550 PLT07560
0929 1	0876	DC DC	NW K0000	•	PLT07570
092A 1 092B 1	0898 0878	DC	PENUP		PLT07580
0926 1	086A	DC	S		PLT07590
092D 1	0874	DC	PENDW		PLT07600
092E 1	0870	DC	NE		PLT07610
092F 1	0898	DC	K0000	END OF ROUTINE 3.	PLT07620
• /	•	*			PLT07630
0930 1	0878	RT4ST DC	PENUP	PICK UP PEN AND PUT	PLT07640
0931 1	087C	DC	LEFT	IT AT LEFT MARGIN.	PLT07650
0932 1	0870	DC	NE	•	PLT07660
0933 1	0868	DC	NN	POSITION PEN TO START	PLT07670
0934 1	0868	DC	NN	WINDMILL PATTERN	PLT07680
0935 1	0898	DC	K0000		PLT07690
0936 1	087A	DC	PENCH	5105 1 TOT 1	PLT07700
0937 1	0874	DC	SW	SIDE 1 TRI 1	PLT07710 PLT07720
0938 1	0876	00	NM NM		PL107720
0939 1	0898	DC DC	K0000 NW	SIDE 2 TRI 1	PL10.730
093A 1 093B 1	0876 0870	DC	NE NE	SIDE Z INI I	PLT07750
093B 1 093C 1	0898	DC	K0000		PLT07760
093D 1	0868	DC	NN	SIDE 3 TRI 1	PLT07770
093E 1	0872	DC	SE	SIDE S TRE I	PLT07780
093F 1	0872	DC	SE		PLT07790
0940 1	0898	DC	K0000		F_T07800
0941 1	0878	DC	PENUP	MOVE TO NEW LOCATION	PLT07810
0942 1	0870	DC	NE		PLT07820
0943 1	0898	DC	K0000	•	PLT07830
0944 1	087A	DC	PENDW		PLT07840
0945 1	0876	DC	NW	SIDE 1 TRI 2	PLT07850
0946 1	0870	DC	NE		PLT07860
0947 1	0898	DC	- KG000		PLT07870
0948 1	0870	DC	NE	SIDE 2 TRI 2	PLT07880
0949 1	0872	DC	SE		PLT07890
094A 1	0898	DC DC	K0000	CIDE 2 TOT 2	PL107900
094B 1 094C 1	086C 0874	DC DC	EE S W	SIDE 3 TRI 2	PL107910 PL107920
094D 1	0874	DC	SW		PLT07930
0945 I	0898	DC	K0000		PLT07940
094F 1	0878	DC	PENUP		PLT07950
0950 1	0872	DC	SE		PLT07960
0951 1	0898	DC	K0000	•	PLT07970
0952 1	087A	DC	PENDW		PLT07980
0953 1	0870	DC	NE	SIDE 1 TRI 3	PLT07990
0954 1	0872	DC	SE		PLT08000
0955 1	0898	DC	K0000		PLT0801 0
0956 1	0872	DC	SE	SIDE 2 TRI 3	PLT0802 0
0957 1	0874	DC	SW		PLT08030
0958 1	0898	DC	K0000		PLT08040
0959 1	086A	DC	S	SIDE 3 TRI 3	PLT08050
095A 1	0876	DC	NW		PLT08060
0958 1	0876	DC	NW		PL T08070
095C 1	0898	DC DC	KOOOO Penup		PLT08080
095D 1	0878 0874	DC.	SW		PLT08090
095E 1 095F 1	0898	DC	K0000		PLT08100 PLT08110
0956 1	087A	DC	PENDW		PLT08110
0961 1	0872	DC DC	SE	SIDE 1 TRI 4	PLT08130
0962 1	0874	DC	SW		PLT08140

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1427 01	OTTER	FUNCTION TEST						
1021 FL	UITER	FUNCTION 1231						
0963 1	0898		DC KOO	00			PLT08150	
0964 1	0874		DC SW	••	SIDE 2 TRI 4		PLT08160	
0965 1	0876		DC NW				PLT08170	
0966 1	0898		DC KOO	00			PLT08180	
0967 1	086E		DC MM		SIDE 3 TRI 4		PLT08190	
0968 1	0870		DC NE				PLT08200	
0969 1	0870		DC NE	00			PLT08210	
096A 1	08 98 08 7 8		DC KOO DC PEN				PLT0822 0 PLT08230	
096C 1	0876		DC NW				PLT08240	
096D 1	0898		DC KOO	00			PLT08250	
096E 1	087A		DC PEN	D₩			PLT08260	
096F 1	0870		DC NE				PLT08270	
097C 1	0872		DC SE				PLT08280	
0971 1	0874		DC SW				PLT08290	
0972 1	0876		DC NW	110			PLT08300 PLT08310	
0973 1 0974 1	0878 0898		DC KOO				PLT08320	
0714 1	0070		DC ROO	•			PLT08330	
0975 1	087E	RTSST	DC BSW	CT			PLT08340	
0976 1	0898		DC KOO	00			PLT08350	
		*					PLT08360	
0977 C	1A32	ABITF			BIT FAILED		PLT08370	
0978 0	2239		DC /22		I T		PLT08380	
0979 0	9E13		DC /9E		SPACE		PLT08390 PLT08400	
097A C	211A 1236		DC /21		F		PLT08410	
097C 0	3E31		DC /3E		Ā		PLT08420	
097D C	2239		DC /22		Ī		PLT08430	
097E 0	5E 23		DC /5E	23	L		PLT08440	
097F 0	3636		DC /36		Ē.		PLT08450	
0980 0	3234		DC /32		D		PLT08460	
0 9 81 0	FFFF		DC /FF	++			PLT08470 PLT08480	
0982 0	1432	ABUSY	DC /1A	32	BUSY		PLT08490	
0983 0	B214	45031	DC /B2		U		PLT08500	
0984 0	9412		DC /9A		Š .		PLT08510	
0985 0	A618		DC /A6	18	Y		PLT08520	
0 9 ,86 0	FEEF		DC /FF	FF			PLTU8530	
							PLT08540	
0987 0	9216	BZAWA			WAS S/B		PLT08550	
0988 0 0989 0	3E31 9A12		DC /3E		A S		PLT08560 PLT08570	
098A 0	2114		DC /21		SPACE		PLT08580	
098B 0	9A12		DC /9A		s		PLT08590	
098C 0	BC11		DC /BC		•		PLT08600	
098D 0	1432		DC /1A		В		PLT08610	
098E 0	FFFF		DC /FF	FF			PLT08620	
2005 0	c / 23	*	25 151		2225 444 7		PL T08630	
098F 0	562 7 622 9	AHALT	DC /56		PROG HALT R		PLT08640 PLT08650	
0931 0	5206		DC /52		Ô		PL T08660	
0992 0	1637		DC /16		Ğ		PLT08670	
0993 0	211A		DC /21		•	•	PLT08680	
0094 0	2638		DC /26	38	H		PLT08690	
0995 0	3E 31		DC /3E		A		PLT08700	
0996 0	5E23		DC. /5E		L		PLT08710	
0997 0	9E13		DC /9E		1		PLT08720	
0998 C	FFFF 05E8		DC /FF END PLB				PLT08730 PLT08740	
U 7 7A	UJEO		LHU FLD	J.1			. 2100170	

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM 1627 PLOTTER FUNCTION TEST CROSS REFERENCE LISTING SYMBOL VALUE REFERENCES ABITE 0885 0977 **ABUSY** 0982 0887 ADSCT 0058 05DC 05DC,0889 AEND 0037 AHALT 098F 0891 AINT 0044 05DC AIVD 003B 05DC 05DC 003E ALD ANINT 0041 05DC+088B ANRDY 004B 05DC,088D AQ5A 0019 ARDY 05DC 004C ASB 0054 05DC **ASCT** 005A 05DC ASWS 0050 05DC 0060 0987 088F AWASB BEGIN 0010 05DC,05E8 0610,0670,0669,0723,0772,0784,0796,0788,0780 **C794** BSWCK BSWCT 087E 0975 05DE 078C,0795,0787,07D8,084C BSW0 BSW1 05DF 079C,07A7 05E0 076F,077E,087F BSW2 05E1 BSW3 07D4,081F,0838 BUSY 07CF CHG1 0757 0729 075E 0766 072B CHG2 CHG3 072D 0895 0892 COMAD CONST 0896 080D,0815 CONT 081C 05F5,0786 07F9,0821 COUNT 0894 DISP 07F2 0616,061A,063E,0546,0652,065E,066E,0687,06A8,06BF, 06CE,06DD,06FA,0721,0736,0743,0750,0764,0784,07FB EE 086C 0633,0644,0681,069C,0688,068A,08A7,0887,08C3,08CA, 08CC,08CE,08DA,08EA,08FB,09CC,0915,091A,094B 0015 05DC,0791 ERBIT 07F1 05F3,0805,0831,0835,083A 07DD 07EE ERBSY 07E 5 ERMSG 07D7 ERROR 0012 05DC . 07UD 07EC 07DF ERRXX ERR1 07D2,07DB,07E2,0809,081A,083E 07D6 ETRAP 0018 EXTRA 0897 063C,064A,0650,0656,065A,0662,06A6,06AC,06DB,06E1, 0734,073A,0741,0747,074E,0754 FNC0 FNC1 0795 079C GDT 0605 05E3 HALT 0014 05DC 0781 07B9 HLTSW HOP 0615 080F HOPY 080F 0817 ILCRP 0030 C5DC 0036 ILIR C5DC 05E2 ILP. ILPAT 0032 05DC 05DC 05DC ILO IL] 0028 0029 IL2 002A 05DC

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002B

002C

068E

0898

05DC,05FE

08CB,08F3,08F9,08FE,0902,090B,0912,0917,091C,091E,0921,0928,092A,092F,0935,0939,093C,0940,0943,0947,

05DC

IL3 IL4

KEEP

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K0000

C

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                                 094A.094E.0951.0955.0958.095C.095F.0963.0966.096A
                                 096D,0974,0976
                                06FF,0801
07A0
              0394
                                 0608
               0898
K0150
K4003
              0890
                                 083C
              0990
C78F
                                 05F1
LDRT1
LEFT
LDG
LDGAG
LDGB
LDGBY
LDGM
                                 07C8
              087C
                                08A2,08F5,0514,0931
                                05DC ,0851
085C
              0913
              0851
085C
0916
                                 0854
               0862
                                0614.0618.0639.0640.0648.0640.0654.065C.0660.0665.
0685.0689.0689.06AA.06AF.06C1.06C6.06D0.06DF.06E4.06F8.
C6FC.071F.0738.073D.0745.074A.0752.0759.0760.0768.
076D.07F3.07F5.0824
                                 0853
LOOK
              089E
              05F3
L PA
MARK
               0992
                                0807
07D0
MBUSY
MEND
               0886
               0888
 MHALT
               0890
                                 05F7,0602,0776,07B3,07C4,07E7,0811,0846,0858,G855
ML SCF
MNINT
MNRDY
               05F4
               0864
               3380
                                 0828
              0864
088E
 MSG
                                 C848
MWASB
NE
                                062D, 067E, 060B, 06F2, 0705, 0719, 0757, 075E, 0766, 08A3, 08A8, 08A4, 08C0, 08D1, 08DD, 08E9, 08F6, 0901, 0920, 092E, 0922, 093B, 0942, 0946, 0948, 0953, 0948, 0969, 096F
               0870
              07F 3
 NEX1
                                0826
060E.0629.0678.0698.0684.0686.06CA.06F4.0701.0885.
0881.08C1.08D0.08E0.08EC.08F7.08FF.0907.0916.0919.
 NN
                                 0925,0933,0934,0930
 NOGO
              0840
0827
                                 0644
                                 C82C,0833
 NRDY
                                 0625-0680-0696-0711-0717-0882-088E-0803-080F-08EF-
08FC-0929-0938-0938-0945-0958-0958-0965-096C-0972
              06CE
                                 1100
 DC TGN
                                 LEB
                                C6E8
08A+,09A9,08AE,08B3.08B8.08BD.08C2.08C7.08CD.08D2.
08D7.08DC.08E1.08E6.08E8.08F0.08EA.0906.090A.090F.
0918.0922.0926.092D.0930.0944.0952.0960.096E
08A1.08A6.08AB.08B0.08B5.08BA.08BF.08C4.08C9.08CF.
08D4.09D9.0911.0913.091F.0924.0928.0930.0941.094F.095D.
               0604
DLD
 PENDA
               087A
 PENUP
                                 0968,0973
05EA,0793
0999
PL BGN
PLOT
              05E8
               07FD
                                0609.0621.0675.06EE.0842
05EB.05F9.05FC
 READY
               082E
              05ED
05F5
 RECEV
                                 0770 .0788
 RECSW
                                064C
0658
0664
 REG01
              0652
065E
07E5
 REGOZ
REGO3
REPT1
                                 07E0,07E1,07E4
              07C2
0500
                                07A9.07AC
07A2.07A4.07AA.07CO
RID
RLOOP
               CTAA
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05DC 05DC 05DC

07C2 07CE

ROKE

ROTY RSTKB

RTABL

0034

0033 0017

07C#

02JAN66 415490

1627 PLOTTER FUNCTION TEST 061F.0673.06EC.0726 0700 RTSET 05E2,0603,0605 RTO OSER 0769 0609 RTI CBAL 07CA 0637 RTZST 08F4 07CS 0683 07CC 06F6 RT3ST OSEE RTA RT4ST 0930 0774,07CD 0771,077A 0768 076A 0600,078F C628,0668,C694,06CC,08AD,0289,08C5,08D8,03E4,0903, 077A RT5A RTSST 0975 RUN RUNIT 0780 OR6A 090E.0918.092C.0959 SBSW2 062F,068F,0709,071B,08AA,08B6,08C6,08DB,08ET,0900 0872 0923,0938,0938,0949,0950,0954,0956,0961,0970 SENSE 05EE.082F.0840 07FF,081C 073C 0749 SENT SIDE 1 0580 0736 SIDE2 0750 059F 0756 069F,06C3 SOACT 05DC.0607.0778.0785.07C6.07E9.0813.0848.085A.0860 START 0011 STOP SVKB 0035 0627.0691.070D.071D.08AC.08BC.08C8.08D5.08E5.C8F1. 08FD.0927.0937.094C.094D.0957.095E.0962.0964.0971 0974 06AL 0665 SWNG1 0678,0683,068C 0644 SKNGZ OSAE OSE 3 SWNG3 SWNG4 0600 0728 0707,0708,070F,0713,0762 TCNTL TIME 0750 06A2,06B1,06D3,06E6,0730,075B TRICT 06A0 084A 07AF , 082A , 084F , 0856 TYPE WHILI 0635.066C.C696.08AF.088B.08D6.08E2.08EE.08F8.0905. 0909,0910,0910,0967

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PAPER TAPE READER/PUNCH FUNCTION TEST

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PAPER TAPE READER/PUNCH FUNCTION TEST

1. PURPOSE

THE FUNCTION TEST IS DESIGNED (1) TO TEST FOR PROPER OPERATION OF THE PAPER-TAPE STATUS INDICATORS AND (2) TO TEST FOR ACCURATE DATA HANDLING BY THE PAPER-TAPE READER AND PAPER-TAPE PUNCH WHEN OVERLAPPED WITH OTHER ELEMENTS OF THE 1130 CUMPUTING SYSTEM.

2. PREREQUISITES

2.1 PROGRAM PREREQUISITES

THE FUNCTION TEST MUST RUN UNDER CONTROL OF THE DIAGNOSTIC MONITOR.

2.2 DECK CUSTOMIZATION

IF THE SYSTEM HAS A PAPER TAPE READER OR A PAPER TAPE PUNCH BUT NOT BOTH. THIS PROCEDURE WILL SELECT AN INITIAL ROUTINE TO BE LOOPED UNTIL THE CPERATOR SELECTS A DIFFERENT ROUTINE OR TERMINATES THE PROGRAM. THIS INFORMATION MAY BE MADE A PERMANENT PART OF THE PAPER TAPE FUNCTION TEST OBJECT DECK BY INSERTING AN EDIT CARD IN FRONT OF THE LAST CARD OF THE DECK.

THE EDIT CARD SHOULD BE PUNCHED AS FOLLOWS.

FOR PUNCH ONLY

FOR READER ONLY

COLS 1-10, +05DF 0001 COLS 11-19, BLANK COLS 20-29, PUNCH GNLY COLS 1-10, +05DF 0002 COLS 11-19, BLANK COLS 20-29, REAGER DNLY

IF THE EDIT CARDS ARE NOT IN THE DECK, READ/PUNCH ONLY CAN BE SPECIFIED BY THE BIT SWITCHES AS IS OUTLINED IN SECTION 3.2.1-B.

2.3 EQUIPMENT PREREQUISITES

A. A PAPER-TAPE READER AND/OR PAPER-TAPE PUNCH.

3. USE PROCEDURE

3.1 LOADING

THIS PROGRAM FOLLOWS THE LOADING PROCEDURES ESTABLISHED BY THE 1130 DIAGNOSTIC MONITOR. REFER TO D. M. DOCUMENTATION.
LOAD THE PAPER TAPE PUNCH WITH BLANK TAPE. LOAD TEST TAPE PRODUCED BY PUNCH INTO THE READER.
FOR THE CONVENIENCE OF "READER ONLY" SYSTEMS, THE TEST PATTERN HAS BEEN INCLUDED ON THE END OF THE PAPER TAPE PROGRAM TAPE AND MAY BE IDENTIFIED BY COMPARING WITH THE SAMPLE TAPE, SECTION 6-1.

3.2 OPERATION

3.2.1 PROGRAM EXECUTION

A. LGAD AND GO MODE

ALL ROUTINES WILL BE EXECUTED EXCEPT ROUTINE 4 AND 5.
ANY DETECTED ERRORS WILL BE IDENTIFIED BY AN ERROR TYPEOUT.

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B. SINGLE PROGRAM AND OVERLAP MODE

AFTER PROGRAM IS LOADED. THE MONITOR WILL WAIT TO ALLOW OPTIONS TO BE SPECIFIED.

- 1. SPECIFY DESIRED OPTIONS AS INSTRUCTED IN SECTION 3.2.2. IF NO OPTIONS ARE DESIRED, NO ENTRY IS REQUIRED. TO EXECUTE ROUTINE 4 OR 5, THE DESIRED ROUTINE MUST BE SELECTED. THEN THAT ROUTINE AND ONLY THAT ROUTINE WILL EXECUTE.
- IF A READER ONLY OR A PUNCH ONLY IS TO BE TESTED AND NO EDIT CARDS HAVE BEEN ADDED TO THE DECK, SELECT THE PROPER ROUTINE AS FOLLOWS,

SW. SETTING ROUTINE

PUNCH TEST 4501 4802 2 READER TEST

PRESS INTERRUPT REQUEST KEY

TO START EXECUTION - EXECUTE MODE MUST BE SPECIFIED SET BIT SWITCHES FOR DESTRED MODE

SW. SETTING CONTROL

EXECUTE WITH NO OPTIONS 00.80 LOOP ON ERROR 8830

BYPASS ALL ERROR PRINTOUTS CCE4

0082 HALT ON ANY ERROR

LOOP ON ERROR AND BYPASS ALL ERROR PRINTOUTS 0680

LOOP ALL PROGRAMS 0090

LOOP ALL PROGRAMS AND HALT ON ERRORS 0092

PRESS INTERRUPT REQUEST KEY.

3.2.2 PROGRAM OPTIONS

THE OPERATOR MAY MODIFY THE EXECUTION OF THE PROGRAM ANY TIME BEFORE OR AFTER IT HAS STARTED EXECUTION BY ENTERING PROGRAM CONTROL OPTIONS OR ROUTINE SELECTION OPTIONS.

- A. PREGRAM CONTROL OPTIONS
 - 1. TO SELECT PROGRAM OPTIONS SET BIT SWITCHES AS INDICATED

SW. SETTING CONTROL

RESET ALL CONTROL OPTIONS 0800 HALT PAPER TAPE PROGRAM LTO START AFTER HALT. 0801 SET SWS TO DESIRED CONTROL OPTION OR OBOO. THEN PRESS INTERRUPT REQUEST KEY.) REALIGN PAPER TAPE IN READER 0840 MANUALLY ALIGN TAPE IN READER 0880

2. PRESS INTERRUPT REQUEST KEY.

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PAPER TAPE READER/PUNCH FUNCTION TEST

B. ROUTINE SELECTION

THE SELECTED ROUTINE WILL LCOP UNTIL THE SELECTION IS CHANGED.

1. TO SELECT ROUTINE OPTIONS SET BIT SWITCHES AS INDICATED

SW. SETTING ROUTINE

4800 ALL ROUTINES 4801 1 PUNCH TEST 2 READER TEST **48C2** 3 PUNCH-READ-COMPARE 4803

OPTIONAL ROUTINES

REPRODUCE TAPE

5 PUNCH FROM BIT SWITCHES (SEE SEC) 5.5) 4BC5

2. PRESS INTERRUPT REQUEST KEY.

ROUTINE 4 AND 5 ARE LCOPING ROUTINES WITH NO TERMINATION. THEY WILL BE EXECUTED ONLY IF SELECTED.

TERMINATION 3.3

> IF THERE ARE NO "LOOP" CONTROL OPTIONS SELECTED, THE PROGRAM WILL TERMINATE AFTER ONE PASS. IF OPTIONS TO LOOP HAVE BEEN SELECTED, THE PROGRAM MAY BE TERMINATED BY-

- 1. REMOVE LOOP OPTIONS AND ALLOW NORMAL TERMINATION.
- 2. SET ENTRY SWITCHES TO 40GB AND PRESS THE INTRPT REQ. KEY.
- RESTART 3.4

TO RESTART THE PROGRAM.

- 1. SET SWITCHES TO 408B.
- 2. PRESS INTERRUPT REQUEST KEY.
- SET SWITCHES TO CORC.
- PRESS INTERRUPT REQUEST KEY.

DEPENDING ON HOW THE PROGRAM WAS TERMINATED. THE LAST THO STEPS MAY NOT BE REQUIRED.

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PAPER TAPE REACER/PUNCH FUNCTION TEST

4. PRINTOUTS

ALL PRINTOUTS ARE IN THE STANDARD FORMAT.

APPNN OORR (MESSAGE)

EPPNN CORR (MESSAGE)

WHERE A IDENTIFIES STATUS MESSAGES
E IDENTIFIES ERROR MESSAGES

PP IS THE PID OF THE PROGRAM CAUSING THE MESSAGE

NN IS THE MESSAGE SEQUENCE NUMBER

RR IS THE ROUTINE NUMBER

MESSAGE IS ANY VARIABLE INFORMATION

4.1 STATUS MESSAGES

A0B02 00C4

RDR ERROR

DSW ERROR WAS DETECTED AFTER A READ COMMAND. OPERATOR MUST DETER-MINE IF TAPE WAS READ PROPERLY BY COMPARING TAPE COLUMN JUST PAST READ STATION WITH MODIFIER WORD OF ERROR-PRINTOUT EOB16 (SEE 4.2). AFTER MAKING ANY TAPE ADJUSTMENTS NECESSARY, SELECT PROGRAM CONTROL OPTIONS PER STEPS A AND B OF PARAGRAPH 3.3 AND TABLE 1.

A0803 000X

TAPE ALIGNED

THE PAPER TAPE TEST RECORD IS ASSUMED TO BE PROPERLY ALIGNED IN THE READER AT THIS TIME.

4.2 ERROR PRINTOUTS

(ROUTINE)
EOBOL OOOX

(DSW WAS) (DSW SHOULD HAVE BEEN)

XXXX CXCO

DSW ERROR AFTER READER-CONTROL COMMAND
THE READER SHOULD BE BUSY AND NOT READY.

(ROUTINE)

(DSW WAS) (DSW SHOULD HAVE BEEN)

E0802 000X

DSW ERROR AFTER PUNCH COMMAND

THE PUNCH SHOULD BE BUSY AND NOT READY.

(RCUTINE)
E0803 OOCX

(DSW WAS) (DSW SHOULD HAVE BEEN)

XXXX OFOO

DSW ERROR AFTER READER-CONTROL AND PUNCH COMMANDS
BOTH THE READER AND PUNCH SHOULD BE BUSY AND NOT READY.

(ROUTINE)

(DSW WAS) (DSW SHOULD HAVE BEEN)

XXXX OXCO RDR NRDY

DSW ERROR WHEN CHECKING FOR READER-READY
THE READER WAS READ AFTER INTERRUPT AND NOW SHOULD BE READY FOR
ANOTHER CONTROL COMMAND.

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(ROUTINE)

(DSW WAS) (DSW SHOULD HAVE BEEN)

DSW ERROR WHEN CHECKING FOR PUNCH-READY
THE PUNCH INTERRUPT HAS BEEN SERVICED AND THE PUNCH SHOULD NOW BE
READY FOR ANOTHER WRITE COMMAND.

(ROUTINE)

(DSW WAS) (DSW SHOULD HAVE BEEN)

READER SERVICE-REQUEST DSW ERROR

ERROR IN DSW DURING INTERRUPT.

(RCUTINE)

(DSW WAS) (DSW SHOULD HAVE BEEN)

XXXX 1000

PUNCH SERVICE-REQUEST DSW ERROR ERROR IN DSW DURING INTERRUPT.

(ROUTINE) X000 808GB (DSW WAS) (DSW SHOULD HAVE BEEN)

XXXX 5000

DSW ERROR WHEN PUNCH AND READER INTERRUPTS RECEIVED AT SAME TIME ERROR IN DSW DURING INTERRUPT.

(ROUTINE)

(DSW WAS) (DSW SHOULD HAVE BEEN)

EOBO9 OOOX XXXX XOCO

DSW ERROR WHEN FIRST INTERRUPT WAS RECEIVED AT THIS TIME THE READER AND THE PUNCH ARE BEING RUN UNDER RACE CONDITION. THE DSW FOR THE DEVICE THAT INTERRUPTS FIRST IS ANALIZED FIRST. ANY ERROR WILL BE PRINTED AS AN EGBOG. SIMILARLY FOR THE SECOND INTERRUPT, ANY ERROR WILL BE PRINTED AS E0010.

(ROUTINE)

(DSW WAS) (DSW SHOULD HAVE BEEN)

E0910 000X XXXX X000

DSW ERROR WHEN SECOND INTERRUPT WAS RECEIVED
AT THIS TIME THE READER AND THE PUNCH ARE BEING RUN UNDER RACE
CONDITION. THE DSW FOR THE DEVICE THAT INTERRUPTS FIRST IS ANALIZED
FIRST. ANY ERROR WILL BE PRINTED AS AN EOBO9. SIMILARLY FOR THE
SECOND INTERRUPT, ANY ERROR WILL BE PRINTED AS EOBIO.

(ROUTINE)
EOB11 OCOX

(DSW WAS) (DSW SHOULD HAVE BEEN)

OOKO XXXX

NO READER INTERRUPT RECEIVED. (DSW SENSED AFTER READER-CONTROL

(ROUTINE)

(DSW WAS) (DSW SHOULD HAVE BEEN)

XXXX OXOO

NO PUNCH INTERRUTP RECEIVED (DSW SENSED AFTER PUNCH CUMMAND)

(ROUTINE) (DS)

(DSW WAS) (DSW SHOULD HAVE BEEN)

NO PUNCH OR READER INTERRUPT (DSW SENSED AFTER READER-CONTROL AND PUNCH COMMANDS)

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PAPER TAPE READER/PUNCH FUNCTION TEST

(ROUTINE)

(WAS) (DATA SHOULD HAVE BEEN)

XXCO XXCO WAS S/B

READ/COMPARE ERROR ROR BUFFER CHANGED
DATA (XXOO) PRINTED AS ENTERED IN CORE-CHANNELS 8-1 RESPECTIVELY.

(ROUTINE)

(WAS) (DATA SHOULD HAVE BEEN)

XXOO XXCO WAS S/B

READ/CCMPARE ERROR (RDR BUFFER UNCHANGED)
DATA (XXXX) PRINTED AS ENTERED IN CORE-CHANNELS 8-1 RESPECTIVELY.

(RCUTINE) E0816 0004 (DSW HAS) DSW DATA

XXXX 0000 XXCO RDR ERRCR

READER-DSW READ ERROR WHEN REPRODUCING TAPES. IF TAPE STOPPED, THE FIRST CHARACTER BEYOND THE READ STATION WAS PERHAPS IMPROPERLY READ. THIS CHARACTER HAS NOT AS YET BEEN PUNCHED. BACK THE READER UP ONE CHARACTER AND PRESS START ON THE P-C. DATA (XXOO) PRINTED AS ENTERED IN CORE-CHANNELS 8-0 RESPECTIVELY.

(ROUTINE)

OPEN SHORT

XXOO YYOO

THE PROGRAM COULD NOT ALIGN THE TAPE IN THE READER IN THE LAST 500 CHARACTERS.

THE PROBLEM IS.

- A. OPEN DATA CHANNEL(S). XXOO SHOULD BE FFOO, WHICH IS THE CHARACTER THAT WOULD BE PLACED IN CORE BY READING AN ALL-BITS CHARACTER. ANY MISSING BIT(S) INDICATE THE OPEN DATA CHANNEL(S).
- B. SHORTED DATA CHANNEL(S). YYCO SHOULD BE 0000, WHICH IS THE CHARACTER THAT WOULD BE PLACED IN CORE BY READING A NO-BITS CHARACTER. ANY BIT(S) PRESENT INDICATE THE SHORTED CHANNEL(S).
- C. IF BOTH XXOO AND YYOO ARE CORRECT.
 - 1. THE TAPE IS NOT IN THE READER CORRECTLY, OR
 - THE READER CAN NOT READ THE FIRST 8 CHARACTERS PROPERLY. IF SO.
 - A. TRY REPRODUCING TAPE BY ENTERING SWITCH SETTINGS IN FOLLOWING SEQUENCE.
 - 1. 4COB STOP THE PROGRAM
 - 2. 4804 LOOP ROUTINE 4
 - 3. 408B RESTART PROGRAM

OF

- B. FOR READER-ONLY SYSTEMS
 - 1. ENTER SWITCHES 400B
 - 2. POSITION TAPE IN READER SO THAT FIRST CHARACTER TO BE READ IS THE FIRST CHARACTER OF THE TEST PATTERN.
 - 3. ENTER SWITCHES 4880
 - 4. ENTER SWITCHES 408B

ALL DATA READ WHICH DOES NOT COMPARE WITH THAT IN THE PROGRAM WILL CAUSE ERROR PRINTOUTS.

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PAPER TAPE READER/PUNCH FUNCTION TEST

5. COMMENTS

THE FUNCTION TEST CONSISTS OF A MAINLINE PROGRAM THAT COMBINES MANY ROUTINES TO PERFORM THREE MAIN TESTS AND ONE OPTIONAL TEST. THESE ROUTINES ARE DESCRIBED IN PARAGRAPHS 5-1 THROUGH 5-4-

THE FUNCTION TEST.

- A. CHECKS DSW FCR PROPER BITS BEFORE ISSUING WRITE (PUNCH) OR CONTROL (READER) COMMANDS.
- B. CHECKS DSW FOR CORRECTNESS AFTER XIO INSTRUCTION.
- C. CHECKS FOR INTERRUPT FROM DEVICE WITHIN SPECIFIED TIME LIMIT.
- D. CHECKS DSW AFTER INTERRUPT IS RECEIVED.
- 5.1 ROUTINE NO. 1 (PUNCH TEST)

TEST NO. 1 CHECKS THE OPERATION OF THE PAPER-TAPE PUNCH WHILE PUNCHING THO 1EST RECORDS. THE RECORD INCLUDES A RIPPLE PATTERN AND AN ALL-CHARACTER PATTERN. (REFER FIGURE 1).

5.2 ROUTINE NO. 2 (READER TEST)

CHECKS THE OPERATION OF THE PAPER TAPE READER WHILE READING ONE RECORD PRODUCED BY THE PUNCH TEST. THE TAPE SHOULD BE INITIALLY PLACED IN THE READER AT SOME POINT PRECEDING THE RIPPLE PATTERN. THE PROGRAM WILL ALIGN THE TAPE PROPERLY IN THE READER. THE TAPE IS ASSUMED TO BE PROPERLY ALIGNED AS SOON AS FOUR CHARACTERS HAVE BEEN CORRECTLY READ.

EACH CHARACTER READ IS COMPARED WITH A WORD IN STORAGE. AN UNEQUAL COMPARE WILL CAUSE AN ERROR TYPEOUT. SEE 4.2.4 THERE WILL BE ONE ERROR TYPEOUT FOR EACH READ/COMPARE ERROR. TAPE MAY BE REALIGNED IN READER BY SETTING SWS. (TABLE 1) AND DEPRESSING INT REQ KEY.

For a routine No. 3 (PUNCH/READ/COMPARE TEST)

THIS TEST CHECKS THE FUNCTION AND RELIABILITY OF THE PAPER TAPE READER AND PUNCH WHEN OPERATED TOGETHER. THE DATA READ IS COMPARED WITH THE DATA PUNCHED IN A NEW TAPE. THIS TEST ALSO HAS THE TAPE ALIGNMENT FEATURE OF TEST NO. 2. THE TEST IS COMPLETE AFTER ONE RECORD HAS BEEN PROCESSED.

5.4 ROUTINE NO. 4 (REPRODUCE-TAPES TEST)

THE OPERATOR HAS THE OPTION OF REPRODUCING ANY TAPE. AGAIN, ALL DEVICE STATUS CHECKING DONE IS TESTS NOS. 1 AND 2 IS INCLUDED IN THIS TEST. ALSO, A DSW ERROR WHEN READING THE TAPE WILL CAUSE A DELAY OF THE PROGRAM UNTIL THE OPERATOR CAN INTERVENE TO VERIFY THAT THE TAPE DID READ PROPERLY.

5.5 ROUTINE NO. 5 (PUNCH FROM BIT SWITCHES)

ROUTINE 5 WILL PUNCH CONTINUOUSLY ANY PATTERN SPECIFIED BY THE BIT SWITCHES. TO SET UP FROM BIT SWITCHES-

TO ENTER PATTERN,

- 1. SET BIT SWITCHES TO CBXX, WHERE XX EQUALS THE DESIRED PATTERN.
- 2. PRESS INTERRUPT REQUEST KEY.

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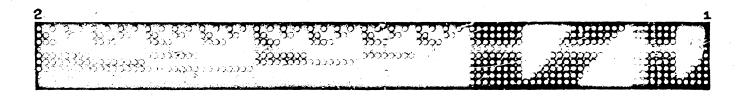
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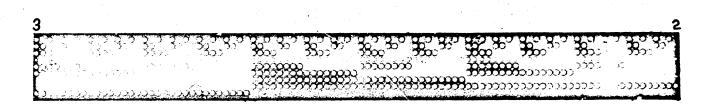
6. APPENDIX

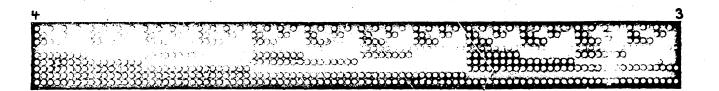
6.1 SAMPLE TAPE

FIGURE 1 SHOWS AN EXAMPLE OF A PAPER TAPE RECORD.









PROG ID 0308-X PAGE 5

DATE 02JAN66 01MAY66 EC NO. 415490 415490B

PAPER TAPE READER/PUNCH FUNCTION TEST

PAPER TAPE READER/PUNCH FUNCTION TEST

20 T		*					30800000
		*				PROG TRANSFER VECTOR	30800010
							30800020
00:.0		BEGIN	£QU		16		30800030
0011		START			BEGIN+1		30800040
0012		ERRUR			START+1		30800050
0013		LOG	EQU		ERROR+1		30B00060
0014		HALT	EQU		LOG+1		30800070
0015		END	EQU		HALT+1		30B00080
0015		*	-40		IIRETTE		30800090
0016		LOGBY	EOII		END+1		30800100
0017		RSTKB			LOGBY+1		30800110
		ETRAP			RSTKB+1	•	30800110
0018 0019		AUSA	EQU		ETRAP+1	*	30800120
0019		AUJA *	EQU		EIKAPTI		30800130
2226		ĪLO	EQU		40		30800150
0028 0029		ILI	EQU		IL 0+1		30800150
		IL2	EQU		IL1+1		30800170
002A		IL2	EQU		IL 2+1		30800170
002B							30800190
002C		IL4	EQU		IL3+1		30800200
0030		ILCRP	_		IL4+4		30800200
0032		ILPAT			ILCRP+2		
0033		ROTY	EQU		ILPAT+1		30800220
0034		RQKB	EQU		RQTY+1	•	30800230
0035		SVKB	EQU		RQKB+1		30800240
0036		ILIR	EQU		SVKB+1		30800250
		*			** ** . *		30800260
0037		AEND	EQU		ILIR+1		30800270
003B		AIVD	EQU		AEND+4	INVLD	30BC0280
003E		ALD	EQU		AIVD+3	LD	30800290
0041		ANINT			ALD+3	NO INTRPT	30800300
0044		AINT	EQU		ANINT+3	INTRPT	30800310
004B		ANRDY			AINT+7	NRDY	30800320
004C		ARDY	EQU		ANRDY+1	RDY	30800330
0050		ASHS	EQU		ARDY+4	SWS	30900340
0054		ASB	EQU		ASHS+4	S/B	30800350
0058		ADSCT	EQU		ASB+4		30800360
005A		ASCT	EQU		ADSCT+2	SELCT	30800370
0060		AWAS	EQU		ASCT+6	WAS	30800380
		*					30800390
		****	****	***	*******	******	30800400
					DIAG	NOSTIC MONITOR *	30800410
		*			4	CONTROLLED *	30800420
		*			1130	PAPER TAPE TEST *	30800430
		****	****	***	******	******	30800440
0000			DRG		*+1500		30800450
		*					30800460
		*			PRO	GRAM STATUS TABLE	30800470
		*					30800480
05DC 0	0800	PID	DC		/0B00	PROGRAM I.D. NO	30800490
05DD 0	0000	RID	DC	•	/0000	TEST NUMBER	30800500
05DE 0	0000	SWO	DC		/0000	FCN O - CONTROL	30800510
05DF 0	0000	SW1	DC		/0000	FCN 1 - LCOP ROUTINE	30800520
05E0 0	0000	SW2	υC			NOT USED	30800530
05E1 0	0000	SW3	DC		/0000	FCN 3 - PUNCH FROM SWS	30800540
05E2 1	0625	0.1.5	DC		PTILZ	INITIALIZATION ADDR	30800550
05E3 1	0631		DC		MGR	LOOP PROGRAM ADDR	30800560
05E4 0	0000	MLSCF			/0000	MAIN LINE SEQ CATL	30800570
05E5 0	0000		DC		/0000	COUNTER ENTRY	30800580
05E6 0	FFFF		DC		/FFFF	TERMINATOR	30800590
3723 0		*	-		, , , , ,		30800600
		*					30800610
		*					30B00620
		•			TAIT	ERRUPT ROUTINE	30800630
		:			1411	ENNOT I NOUTTHE	30800640
0567.0	0000	POINT	חר		/0000	IE	30800650
05E7 0	0000	LOINI					30800660
	00000744		XIO	L	XIOSD	SENSE DSW	30800670
05Em 0	D072		STO		DSWIT		3000010
				-			

								taj kali s	
05EB (01	65800667		LDX	11	INTEX			30B00680
		4D80065E		BSC		HANDL-1			30800690 30800700
	-	F5000664 E5800667	SINT	FUR AND		INTEX-3 INTEX			30BC0710
		4C180615		BSC	Ĺ	PINT3.+-	BR IF DSW OK		30800720
		66000756		LDX	L2	NIPES	SVC REQ ERROR		30800730
05F7 (0	701F		MDX		PINT1			30600 740 30800 750
05F8 (0	F06B	* DINT	EOR		INTED	CK DSW FOR 2 SVC REQ		30800760
	_	40000000	5	BSC	L	/0000	BR IF 2ND DOUBLE INT		30B00770
05FB (-	D066	DINTL	-		DSWDI			30800780
05FC (_	E067		AND STO		INTED DSWID			30800790 30800800
05FD (D065 4C20060E		BSC	L	DINT4,Z	EXIT IF ONLY ONE REC		30800810
0600		C061		LD		DSWDI			30800820
		4C180615		BSC	L	PINT3,+-	BR IF DSW OK		30800830
		66000760 7011		LDX MDX	LZ	DINE1 PINT1			30800840 3080085 0
0605	U	7011	*	MUA		F1.11.1			30800860
0606	0	E85C	DINT2	OR		DSWID			30800870
0607		D055		STO		DSWIT			30800880 30800890
0608	0	FOSB	*	EOR		INTED	•		30800900
0609 (01	4C180615	•	BSC	L	PINT3,+-	BR IF DSW OK		30800910
060B	01	66000765		LDX	L2	DINE2			30800920
060D (0	7009		MDX		PINT1			308009 30 308009 40
		•	*						308C0950
060E (0	1140	DINT4	SLCA	1	0	•		30800960
060F		1001		SLA		1			30800970
0610		D04D		STO		BUMRQ DINT2	ZERO IF NO IEQ BIT SET SECOND INT SW		30B00980 30B00990
0613		65000606 69E6		LDX STX		DINT1-1	SET SECOND INT SW		32801000
0614		700B		MDX	-	XIT			30801010
			*						30801020
		66000775 6700077D	PINT3 PINT1			DINE6 BSYES	CHECK BUSY DSW NEXT		30B01030 30B01040
0619		6BCA	LIMIT	STX		MLSCF	CHECK BOST BSW NEXT		30801050
-		6E000792		STX		XBSYX+1		PRO1	30801060
			*			57040	DESTROY INTERRUPT		30801070
		C4000018 D4000032		LD STD	L	ETRAP Ilpat	* TRAP ADDRESS		30801080 30801090
OULE (••	54000032	*	3.0	-	10,00	THE ROOKESS		30801100
0620	01	4C8005E7	XIT	BSC	I	POINT	EXIT INTERRUPT RT	1.X	30801110
			*****	****	* * *	*******	******		30801120 30801130
	•		****	****	***	******	**************		30B01130
0622	CO	44800010	PTBGN	BSI	I	BEGIN	CALL MONITOR *	SC	30B01150
0624	1	05DC		DC		PID	ADDR OF PID NO *		30801160
			*****	****	***	*******	******		30801170 30801180
			****	****	***	******	*********		30801190
			*						30B01200
			*			INI	TIALIZATION ROUTINE		30801210
0625	^	0000	* PTILZ	חר		/0000	ENTRY POINT	SE	30801220 30801230
0023	U	0000	*			70000	CHIKI YOUN	30	30801240
0626		COB7		LD		SWO	CK ALIGN TAPE SW		30801241
0627		1008		SLA		8 .	DEALTON TE CET		30801242 30801244
0628		4810 1010		BSC SLA		16	REALIGN IF SET		30801244
		D40007CD		STO	L		SET ALIGN TAPE SW		30801260
		66000631		LDX		MGR	SET MAIN LINE SEQ		30801270
062E				STX BSC	12	MLSCF PTILZ	* CONTROL FIELD	SX	30801280 - 30801290
U02F (JI	40800625	****					3^	30801290
									30801310
			• .						30801320

						i i	4		•		
		The second second				ļ					
IBM MAINTENANCE DI	AGNOSTIC PROGRAM	FOR THE 113	O SYSTEM	PART NO. PAGE	2191232		•	IBM MAINTENANCE D	AGNOSTIC PRO	GRAM FOR THE	1130 SYSTEM
			•				•	PAPER TAPE READER	DUNCH SUNCTI	ON TEST	
PAPER TAPE READER/	PUNCH FUNCTION TO	EST						PAPER TAPE READER	PUNCH FUNCTI	DN 1E31	
			•			1 -					
							*				
0631 0 1810	MGR SRA	16		30B01330	* *			•	• •		
0632 0 DOAA		RID		30801340							
	*			30801350						TEST	1 - PUNCH TEST
0633 01 660005DC	MGR1 LDX L2 I	PID		30801360	•				*		cer con a neconne
0635 0 C203			SURE PROPER ENTRY	30801370				066A 00 6500030E	RTN1I LDX	1 WRECK	SET FOR 2 RECORDS
0636 0 D025		SWCMP		30801380				066C 0 6968 066D 01 44000835	RTN1 BSI	_	BUILD NEXT CHARACTER SC
0637 0 100D		13		30B01390 30B01400				066F 0 4066	B51	XKRDY	PUNCH READY SC
0638 0 180D	SRA 1	13		30801410				0670 01 40000731	BSC		PUNCH ONE CHARACTER
0639 0 4820	BSC 2	z SE	T ROUTINE ID	30801420				0672 0 405A	RTN1A BSI	CRASH	SC
063A 0 D201		RID-PID		30801430				0673 0 70F9	MDX	RTN1	$\mathcal{L}_{ij} = \mathcal{L}_{ij} = \{ (i,j) \in \mathcal{L}_{ij} \mid (i,j) \in \mathcal{L}_{ij} : i \in \mathcal{L}_{ij} \in \mathcal{L}_{ij} \} $
	•		•	30801440					•		
0636 01 658005DD	LDX 11 F	RID UP	PDATE THE RID	30801450					*	162	2 - READER TEST
063D 0 4818	BSC	 -		30B01460				0674 01 44000835	RTN2I BSI	L MARK	BUILD NEXT CHARACTER SC
053E 0 7101	MDX 1	l IN	IDEX THE ROUTINE NO	30B 01470				0676 0 4079	BSI	RRDY	READER READY SC
0/35 0 /000	# CTV 1.		T RTN NO AND ADDR	30801480 30801490				0677 01 4C00070A	BSC		CONTROL READER
063F 0 699D 0640 01 C5000654	STX 1 F	RTCON-1	I KIN NO AND ADDR	30801500				0679 01 44000793	RTN2A BSI		READ AND COMPARE SC
0840 01 030/0854	*	VICON-I		30B01510				067B 0 4051	BSI	CRASH.	SC
0642 0 6300	LDX 3 (D RE	STORE CHAR RTN	30801520				067C 0 70F7	MDX	RTN21	
0643 01 6F00083D	STX L3 I			30801530					*		
0645 0 6301	LDX 3	L.		30801540						***	
0646 01 6F00083B	STX L3 [DULP-1		30801550		•				IE2	3 - PCH-RD + COMPARE
	*			30801560				067D 01 44000835	RTN3I BSI	L MARK	BUILD NEXT CHARACTER SC
0648 00 67000187	LDX L3		T RECORD LENGTH	30801570				067F 0 4056	BSI	XKRDY	PUNCH READY SC
064A 01 6F0006D5	STX L3 I		CET CORRECT CH	30801580 30801590				0680 0 406F	BSI	RRDY	READER READY SC
064C 0 62F8 064D 01 6E00J7CC	LDX 2 - STX L2 (SET CORRECT SW	30801590				0681 01 4C00071B	BSC		PUNCH + CONTROL RDR
364F 00 660001F4	LDX L2			30801610				0683 01 44000793	RTN3A BSI	L RDIT	READ AND COMPARE SC
0651 01 6E0007D1	STX L2 1			30801620				0685 0 4047	BSI	CRASH	SC
				30801630		5.		0686 0 70F6	MDX	RTN3I	
0653 01 4D800654	BSC II F	RTCON-1 BR	TO USER ROUTINE	30801640		:			*		
	•			30B01650					•	TE C	4 - REPRO PAPER TAPE
	*		• •	30801660					*	163	4 - REPRO PAPER TAPE
0.55 1 0.74	# 07CON DC (TAILT DI	INCH POUTTNE	30B01670 30B01680				0687 01 C40005DF	RTN41 LD	L SW1	
0655 1 066A 0656 1 0674			INCH ROUTINE ADER RTN	30801690				0689 01 40180633	BSC		BR IF NO EXECUTE RTN
0657 1 067D			H + RDR CHECK	30B01700				0688 0 1010	SLA	16	
0658 1 0687			PRODUCE TAPE	30801710				068C 01 D40007CB	STO	L ERRET	
0659 1 06BB	DC F	RTN5I PC	H BIT SW: DATA RTN	30801720				068E 01 D400080B	STO		PUNCH FEED HOLE 1ST
065A 1 089D			ID ROUTINE	30801730				0690 01 C40005DF	RTN4 LD Eor	L SW1 SWCMP	
065B 1 089D	-	TEND EN	D ROUTINE	30801740				0692 0 F0C9 0693 01 4C200633		L MGR1.Z	BR IF END ROUTINE
0/56 0 0000	#	(0000 EH	11 COMPARE WORD	30801750				0695 0 4040	BSI	XKRDY	PUNCH READY
065C 0 0000			:*************	30801760 30801770				0696 0 4059	BSI	RRDY	READER READY SC
	*			30801780			•	0697 01 4C00071B	BSC	L XFEED	PUNCH + CONTROL RDR
0650 0 0000	-	/0000 LA	ST INTERRUPT DSW	30801790				0699 01 00000748	RTN4A XIO		READ RDR BUFFER
065E 0 0000		0000		30B01800				069B 01 C400080A		L CARED	PLACE CHAR READ IN
065F 1 05EF			ITERRUPT BR ADRS	30801810		,		069D 01 D400080B		L XCHAR 32	* OUTPUT AREA
0660 1 05EF		SINT		30801820				069F 0 10A0 06A0 01 0C000744	SLT	L AIOSD	SENSE DSW
0661 1 05F8		INT		30B01830 30B01840	•			06A2 01 4C100690		L RTN4,-	BR IF NO DSW ERRORS
0662 0 0000		/0000 /0000 ID	ENTIFY INT YET EXP	30B01840 30B01850				0644 0 6116		1 /0016	PRINT RDR EKROR
0663 0 0000	TOWIN DC /	10000	PENTIFI IN TEL EXP	30801860				· 06A5 01 66000880		L2 RDR	
0664 0 5000	INTED DC	75000 RD	R-PCH SVC REQ EXP	30801870				06A7 01 74010803	MDX	L EMESG,1	
0665 0 4000			R SVC REQ	30801880				06A9 01 440007EC		L PRDSW	MC
0666 0 1000		/1000 PC	H SVC REQ	30801890				06AB 01 74FF0803		L EMESG,-1	
0667 0 0000	INTEX DC		TERRUPT EXPECTED	30801900				06AD 01 740105DE		L SW0,1	REQUEST OPER ACTION
	*		= READER	30801910		~		06AF 0 6102 06B0 01 CC000880	REQST LDX	L RDR	ALQUEST OFER ACTION
	▼	* 2	? = PUNCH B = BOTH	30801920 30801930				0682 01 44000810		L PTLOG	MC
0668 1 074A	DC F		ADER	30B01930 30B01940				06B4 01 44000826		L TIME	PAUSE FOR OPERATOR
0669 1 074B			INCH	30801950	•	-		0686 01 C40005DE		L SWO	•
3007 2 0170			*****	30801960				0688 01 4C0406AF		L REQST.E	
	•			30B01970		_		068A 0 70D5	MDX	RTN4	
	***			30801980					₹	***	S - DIINCH EDOM DIT CHE
		** * * * * * * * * * * * * * * * * * * *	TECTE	30B01990 30B02000					•	152	5 - PUNCH FROM BIT SWS
	•	MAINLINE	: 15313	30802000		• • • • • • • • • • • • • • • • • • •			en e		

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PART NO. 2191232 PAGE 2A

30B02070 30B020B0 30B02090

30802100 30802110 30802120 30802130 30802140

30B0215C 30802160 30802170 30802180

30B02250

30802260 30802270 30802280

30802370 30802380 30802390

30802400 30802410 30802420 30B02440

30B02680

PAPER TAPE READER/PUNCH FUNCTION TEST

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PAPER TAPE READER/PUNCH FUNCTION TEST

								**	
06BB 01	C40005DF	RTN51	LD	Ł	SW1			30802690	,
	4C180633		BSC	Ĺ	MGR1,+-	BR IF NO EXECUTE RTN		30802700	
	C40005DF	RTN5	LD	Ĺ	SW1			30802710	
	F09A		EOR	_	SWCMP			30802720	
	4C200633		BSC	L	MGR1.Z	BR IF END ROUTINE		30802730	
	C40005E1		LD	Ĺ	SW3	DK 11 END KOOTING		30B02740	
				_	8			30B02750	
0606 0	1008		SLA						
	D400080B		STO	L	XCHAR			30802760	
0669 0	400C		BSI		XKRDY			30B02770	
	4000731		BSC	L	PUNH	PUNCH ONE CHARACTER		30802780	
06CC 0	70F2	RTN5A			RTN5			30802790	
		****	****	***	* *******	************	*	30802800	
		*						30B0281 0	
		*			COUNT	T CHARACTERS ROUTINE		30B0282 0	
		*						30802 830	
06CD 0	0000	CRASH	DC		/0000		SE	30802840	
06CE 01	74FF06D5		MDX	L	WRECK,-1			3080285 0	
06DO 0	7002		MDX		RASH			30B02860	
								30802870	
0601 01	4C0C0633		BSC	L	MGR1	BR IF END OF RECORD		30B02880	
	1000000	*		_				30802890	
0603.01	4C8006CD	RASH	BSC	1	CRASH	RET IF RCD NOT CMPLT	S¥	30B02900	
0000 01	4000000	*	236	•	J.,	NOO NOT OMFLE	J.	30802900	
06D5 0	0000	WRECK	. שנ		/0000			30802910 30802920	
0005 0	3000			***		*************		30802920	
		*			******				
					10000			30B02940	•
06D6 0	0000	XKRDY		_	/0000		SE	30802 950	
	C40005DE		LD	L	SWO			30802960	
0609 01	650006D7		LDX	Ll	XKRDY+1			30802970	
06DB 01	4C0407FD		BSC	L	PDSWX.E	BR IF HALT PROGRAM		30802980	
		*						308029 90	
06DD 0	0866		XIO		XIOSD	SENSE AND SAVE DSW		30803000	
06DE 0	D076		STO		DSWAS			30803010	
		*						30803020	
06DF 0	E06B		AND		XMASK	REMOVE RDR NRDY BIT		30803030	
		*					•	30B03040	
06F0 01	4C9806D6		BSC	1	XKRDY.+-	BR IF DSW OKAY	SX	30803050	
0000 01	10,00000	*		-	,	, 511 21 5511 51111	•	30803060	
06E2 0	1007	•	SLA		7	PRINT DSW ERROR		30803070	
				1 2	· ·	PRIMI DOW ERROR			
	6600087E		LDX	LZ	PNRDY	DD 15 DSH NDDY		30803080	
06E5 0	4810		BSC	_	_	BR IF PCH NRDY		30B03090	
06E6 0	6200		LDX		0			30803100	
06E7 0	6105		LDX	1	5			30B03110	
06E8 0	C86C		LDD		DSWAS			30803120	
06E9 0	E067		AND		POFF			30B03130	
06EA 0	1800		RTE		16			30803140	
06EB 01	440007EC		BSI	L	PRDSW		MC	30803150	
		*						3080316 0	
06ED 01	44000826		BSI	L	TIME	PAUSE BEFORE RECHECK	SC	30B03170	
	70E7		MDX		XKRDY+1			30803180	
		****	****	***		*********		30B03190	
		*						30803200	
		*						30803210	
					READS	ER READY ROUTINE		30B03220	
					NEADE	IN READ I ROUTINE		30803230	
0650 0	0000	RRDY	DC		/0000		SE	30803240	
06F0 0	0000	RKUT					35		
	C40005DE		LD	L.	SWO			30803250	
	650006F1		LDX		RRDY+1	BB 15 HALT BOOKBAN		30803260	
U6F5 01	4C0407FD		BSC	L	PDSWX.E	BR IF HALT PROGRAM		30803270	
		*						30803280	
06F 7 0	084C		XIO		XIOSD	SENSE AND SAVE DSW		30803290	
0678 0	D05C		STO		DSWAS			30803300	
		*						30B03310	
06F9 0	E050		AND		RMASK	REMOVE PCH NRDY BIT		30B03320	
		*						308033 30	
06FA 01	4C9806F0		BSC	1	RRDY,+-	BR IF DSW OKAY	SX	30803340	
					- · · · · · · · · · · · · · · · · · · ·			30B03350	
06F2 0	1005		SLA		5	PRINT DSW ERROR		30B03360	
	·				1				
DATE	02JAN66	OlMAY	56					PROG ID	0308-4
EC NO.	415490	41549						PAGE	3
1101	127770	49.045							• •
		21							

					100				
			1,1,1,1,1,1						
OŽED	^1	6600087C	4 5	LDX	12	RNRDY			30B03370
06FF		4810	A	BSC	LZ	-	BR IF RDR NRDY		30803380
0700	-	6200	•	LDX	2	0			30B03390
0701		6104		LDX	ī				30803400
0702	0	C852		LDD		DSWAS	•		30B03410
0703		E04C		AND		ROFF			30B03420
0704		18D0	• *	RTE		16			30803430
0705	01	440007EC		BSI	L	PRDSM		MC	30803440
0707	۸,	44000826	•	BSI	L	TIME	PAUSE BEFORE RECHECK	sr	30803450 30803460
0707		70E7		MDX	_	RRDY+1	PAOSE BEI DRE RECITEOR	30	30803470
0.02	•		*****		***		***********		30803480
			*						30803490
			*			CONT	TROL READER ROUTINE		30803500
			*			_			30803510
070A			FEED	LDX		1	SET READER INTRPT		30803520
070B	01	6D000667	_	STX	LI	INTEX	* EXPECTED		30803530 30803540
0700	٥,	C4000621	*	LD	L	XIT+1	SET INTERRUPT LEVEL		30803550
	-	D4000032		STO	Ĺ	ILPAT	* TRAP ADDRESS		30B03560
0711		0834		XIC	•	XIOFD	FEED READER		30803570
• • • • • • • • • • • • • • • • • • • •	•		*					*	30803580
0712	0	0831		XIO		XIOSD	SAVE BUSY DSW		30803590
0713	0	D03F		STO		DSWBY			30803600
			*	2					30803610
G714	01	44000826		BSI	L	TIME	PAUSE FOR INTRPT	SC	30803620
	_		. •			10011	COLUT NO INTERF ERR		30803630
0716 0717		6111 C83B		LDX	Ţ	/0011 DSWBY	PRINT NO INTRPT ERR		30803640 30803650
0718		E037		AND		ROFF			30803660
0719		E833		OR		DSWR2			30803670
071A		7056		MDX		DINES			30803680
			****						20002100
			****		***		********		30A03690
			*		***				30803700
			*		***		CH AND CONTROL READER		30803700 30803710
			*		***				30803700 30803710 30803720
0710		45000558	*			PUNC	CH AND CONTROL READER ROUTINE		30803700 30803710 30803720 30803730
		650005FB	*	LDX	L1	PUNC	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT		30803700 30803710 30803720 30803730 30803740
		650005FB 600005FA	* * * * XFEED		L1	PUNC	CH AND CONTROL READER ROUTINE		30803700 30803710 30803720 30803730 30803740 30803750
0710	01	600005FA	*	LDX STX	L1 L1	PUNC	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH		30803700 30803710 30803720 30803730 30803740
071D 071F	01 0	600005FA	* * * * XFEED	LDX	L1 L1	PUNC DINT1 DINT1-1	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT		30803700 30803710 30803720 30803730 30803740 30803750 30803760
071D 071F	01 0	600005FA 6103	* * * * XFEED	LDX STX LDX	L1 L1	PUNC DINT1 DINT1-1	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DOUBLE INTRPT		30803700 30803710 30803720 30803730 30803740 30803750 30803760 30803770
071D 071F 0720 0722	01 0 01 01	600005FA 6103 60000667 C4000621	* * * * * * * XFEED	LDX STX LDX STX	L1 L1 L1	PUNC DINT1 DINT1-1 3 INTEX XIT+1	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL		30803700 30803710 30803720 30803730 30803740 30803750 30803760 30803770 30803780 30803790 30803800
071D 071F 0720 0722	01 0 01 01	600005FA 6103 60000667	*	LDX STX LDX STX	L1 L1 L1	PUNC DINT1 DINT1-1 3 INTEX	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT SWITCH SET DOUBLE INTRPT EXPECTED		30803700 30803710 30803720 30803730 30803740 30803750 30803760 30803770 30803780 30803790 30803800 30803810
071D 071F 0720 0722 0724	01 0 01 01 00	6103 60000667 C4000621 04000032	* * * * * * * XFEED	LDX STX LDX STX LD STO	L1 L1 L1	PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS		30803700 30803710 30803720 30803730 30803750 30803750 30803760 30803770 30803780 30803780 30803800 30803800 30803800
071D 071F 0720 0722 0724 0726	01 01 01 01 00	6103 61000667 C4000621 04000032	*	LDX STX LDX STX LD STO	L1 L1 L1	PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL		30803700 30803710 30803720 30803730 30803750 30803750 30803760 30803770 30803780 3080380 3080380 3080380 30803810 30803820 30803830
071D 071F 0720 0722 0724	01 01 01 01 00	6103 60000667 C4000621 04000032	*	LDX STX LDX STX LD STO	L1 L1 L1	PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS		30803700 30803710 30803720 30803730 30803750 30803760 30803770 30803770 30803780 30803800 30803800 30803820 30803830 30803840
071D 071F 0720 0722 0724 0726 0727	01 01 01 00 0	60005FA 6103 60000667 C4000621 04000032 081B 081E	*	LDX STX LDX STX LD STO XIO	L1 L1 L1	PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH		30803700 30803710 30803720 30803730 30803750 30803750 30803770 30803770 30803790 30803800 30803810 30803820 30803820 30803840 30803850
071D 071F 0720 0722 0724 0726 0727	01 01 01 00 0	600005FA 6103 60000667 C4000621 04000032 081B 081E	*	LDX STX LDX STX LD STO XIO XIO	L1 L1 L1	PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS		30803700 30803710 30803720 30803730 30803740 30803750 30803770 30803780 30803800 30803810 30803820 30803830 30803850 30803850
071D 071F 0720 0722 0724 0726 0727	01 01 01 00 0	60005FA 6103 60000667 C4000621 04000032 081B 081E	*	LDX STX LDX STX LD STO XIO	L1 L1 L1	PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH		30803700 30803710 30803720 30803730 30803750 30803750 30803770 30803770 30803790 30803800 30803810 30803820 30803820 30803840 30803850
071D 071F 0720 0722 0724 0726 0727 0728 0729	01 01 01 00 0	600005FA 6103 60000667 C4000621 04000032 081B 081E	* * * * * XFEED * *	LDX STX LDX STX LD STO XIO XIO	L1 L1 L1	PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH	SC	30803700 30803710 30803720 30803730 30803750 30803760 30803770 30803780 30803890 30803810 30803820 30803830 30803850 30803850 30803850 30803850
071D 071F 0720 0722 0724 0726 0727 0728 0729	01 01 01 00 0 0	6103 61000667 C4000621 04000032 081B 081E 081B D029 44000826	* * * * * XFEED * *	LDX STX LDX STX LD STO XIO XIO XIO STO		PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DOUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW PAUSE FOR INTERRUPT	sc	30803700 30803710 30803720 30803730 30803750 30803750 30803760 30803770 3080380 30803810 30803810 30803820 30803830 30803850 30803850 30803850 30803850 30803870 30803870 30803890 30803890
071D 071F 0720 0722 0724 0726 0727 0728 0729 072A	01 001 01 00 00 00 01	600005FA 6103 60000667 C4000621 04000032 081B 081E 081B 0029 44000826 6113	* * * * * * * * * *	LDX STX LDX STX LD STO XIO XIO STO BSI LDX		PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME /0013	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW	sc	30803700 30803710 30803720 30803730 30803750 30803760 30803770 30803790 30803890 30803810 30803810 30803820 30803850 30803850 30803850 30803850 30803850 30803860 30803890 30803890 30803910
071D 071F 0720 0722 0724 0726 0727 0728 0729 072A	01 001 01 00 00 00 01	600005FA 6103 60000667 C4000621 04000032 081B 081E 081B 0029 44000826 6113 C025	* * * * * * * * * *	LDX STX LDX STX LD STO XIO XIO XIO STO BSI LDX LDX		PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME /0013 DSWBY	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DOUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW PAUSE FOR INTERRUPT	sc	30803700 30803710 30803710 30803730 30803750 30803760 30803770 30803780 30803800 30803810 30803820 30803820 30803850 30803850 30803850 30803850 30803850 30803850 30803850 30803850 30803850 30803850 30803850 30803850
071D 071F 0720 0722 0724 0726 0727 0728 0729 072A 072C 072D 072E	01 01 01 00 0 0 0	600005FA 6103 60000667 C4000621 04000032 081B 081E 081B D029 44000826 6113 C025 18D0	* * * * * * * * *	LDX STX LDX STX LD STO XIO XIO XIO STO BSI LDX LD RTE		PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME /OO13 DSWBY 16	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DOUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW PAUSE FOR INTERRUPT	sc	30803700 30803710 30803720 30803730 30803750 30803760 30803770 30803780 30803890 30803810 30803820 30803830 30803850 30803850 30803850 30803850 30803850 30803850 30803890 30803910 30803910 30803920 30803930
071D 071F 0720 0722 0724 0726 0727 0728 0729 072A 072C 072D 072E 072F	01 01 01 00 0 0 0 0	600005FA 6103 6D000667 C4000621 04000032 081B 081E 081B D029 44000826 6113 C025 1800 C01F	* * * * * * * * *	LDX STX LDX STO XIO XIO XIO STO BSI LDX LDX LDX LDX LDX LDX LDX		PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME /0013 DSWBY 16 DSWRX	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DOUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW PAUSE FOR INTERRUPT	sc	30803700 30803710 30803720 30803730 30803750 30803750 30803770 30803770 30803800 30803800 30803800 30803810 30803820 30803840 30803850 30803850 30803850 30803850 30803850 30803920 30803920 30803920 30803940
071D 071F 0720 0722 0724 0726 0727 0728 0729 072A 072C 072D 072E	01 01 01 00 0 0 0 0	600005FA 6103 60000667 C4000621 04000032 081B 081E 081B D029 44000826 6113 C025 18D0	* * * * * * * * *	LDX STX LDX STO XIO XIO XIO STO BSI LDX LDX RTE LD MDX		PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME /0013 DSWBY 16 DSWBY 16 DSWBY DSWB	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DOUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW PAUSE FOR INTERRUPT	SC	30803700 30803710 30803720 30803730 30803750 30803750 30803760 30803770 3080380 3080380 30803810 30803820 30803830 30803850 30803850 30803850 30803850 30803870 30803890 30803910 30803910 30803930 30803930 30803930 30803950
071D 071F 0720 0722 0724 0726 0727 0728 0729 072A 072C 072D 072E 072F	01 01 01 00 0 0 0 0	600005FA 6103 6D000667 C4000621 04000032 081B 081E 081B D029 44000826 6113 C025 1800 C01F	* * * * * * * * *	LDX STX LDX STO XIO XIO XIO STO BSI LDX LDX LDX RTE LD MDX		PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME /0013 DSWBY 16 DSWBY 16 DSWBY DSWB	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DOUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW PAUSE FOR INTERRUPT PRINT NO INTRPT ERR	sc	30803700 30803710 30803720 30803730 30803750 30803750 30803770 30803770 30803800 30803800 30803800 30803810 30803820 30803840 30803850 30803850 30803850 30803850 30803850 30803920 30803920 30803920 30803940
071D 071F 0720 0722 0724 0726 0727 0728 0729 072A 072C 072D 072E 072F	01 01 01 00 0 0 0 0	600005FA 6103 6D000667 C4000621 04000032 081B 081E 081B D029 44000826 6113 C025 1800 C01F	* * * * XFEED * * * *	LDX STX LDX STO XIO XIO XIO STO BSI LDX LDX LDX RTE LD MDX		PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME /0013 DSWBY 16 DSWRX DINE5	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DOUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW PAUSE FOR INTERRUPT PRINT NO INTRPT ERR	sc	30803700 30803710 30803710 30803730 30803750 30803760 30803770 30803790 30803800 30803810 30803820 30803820 30803850 30803850 30803850 30803850 30803890 30803910 30803910 30803920 30803930 30803930
071D 071F 0720 0722 0724 0726 0727 0728 0729 072A 072C 072D 072E 072F 0730	01 01 01 00 0 0 0 0	600005FA 6103 60000667 C4000621 04000032 081B 081E 081B D029 44000826 6113 C025 1800 C01F 7040	* * * * * * * * * * * * * *	LDX STX LDX STO XIO XIO XIO STO BSI LDX LDX LDX RTE LD MDX		PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME /0013 DSWBY 16 DSWRX DINE5	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW PAUSE FOR INTERRUPT PRINT NO INTRPT ERR CH ROUTINE	sc	30803700 30803710 30803720 30803730 30803750 30803750 30803770 30803770 30803800 30803810 30803820 30803830 30803850 30803850 30803850 30803850 30803850 30803850 3080390 3080390 30803920 30803920 30803950 30803950 30803970 30803970 30803970 30803990
071D 071F 0720 0722 0724 0726 0727 0728 0729 072A 072C 072D 072E 072F 0730	01 01 01 00 0 0 0 0	600005FA 6103 60000667 C4000621 04000032 081B 081E 081B D029 44000826 6113 C025 1800 C01F 7040	* * * * XFEED * * * * * * *	LDX STX LDX STO XIO XIO XIO STO BSI LDX LD RTE LD MDX ******	L1	PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME /0013 DSWBY 16 DSWBY 16 DSWBY PUNC 2	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW PAUSE FOR INTERRUPT PRINT NO INTRPT ERR CH ROUTINE SET PUNCH INTRPT	SC	30803700 30803710 30803720 30803730 30803750 30803750 30803770 30803770 3080380 3080380 3080380 30803810 30803820 30803830 30803850 30803850 30803850 30803850 3080390 3080390 30803920 30803920 30803950 30803950 30803950 30803960 30803980 30803980 30803980 30803980 30803980 30803980 30803980 30803980 30803980 30803990 30803990 30803990 30803990 30803990 30803990
071D 071F 0720 0722 0724 0726 0727 0728 0729 072A 072C 072D 072E 072F 0730	01 01 01 00 0 0 0 0	600005FA 6103 60000667 C4000621 04000032 081B 081E 081B D029 44000826 6113 C025 1800 C01F 7040	* * * * * * * * * * * * * * * * * * *	LDX STX LDX STO XIO XIO XIO XIO STO BSI LDX LD RTE LD MDX	L1	PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME /OO13 DSWBY 16 DSWBY 16 DSWBY 16 DSWBY 16 DSWBY	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW PAUSE FOR INTERRUPT PRINT NO INTRPT ERR CH ROUTINE	SC	30803700 30803710 30803710 30803730 30803750 30803760 30803770 30803790 30803800 30803810 30803820 30803820 30803850 30803850 30803850 30803850 30803850 30803890 30803910 30803910 30803910 30803910 30803970 30803970 30803970 30803970 30803970 30803970 30803970 30803970 30803970 30803970 30803970 30803970 30803990 30803990 30803990 30803990 30804000 30804010
071D 071F 0720 0722 0724 0726 0727 0728 0729 072A 072C 072D 072E 072F 0730	01 01 01 00 0 0 0 0 0	600005FA 6103 60000667 C4000621 04000032 081B 081E 081B D029 44000826 6113 C025 1800 C01F 7040 6302 66000667	* * * * * * * * * * * * * *	LDX STX LDX STO XIO XIO XIO STO BSI LDX LD RTE LD MDX ******	L1 L1 L1 L L L L L L L L L L L L L L L	PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME /0013 DSWBY 16 DSWRX DINE5 ************************************	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW PAUSE FOR INTERRUPT PRINT NO INTRPT ERR CH ROUTINE SET PUNCH INTRPT * EXPECTED	SC	30803700 30803710 30803710 30803730 30803750 30803760 30803770 30803780 30803800 30803810 30803810 30803820 30803850 30803850 30803850 30803850 30803850 30803910 30803910 30803910 30803910 30803910 30803910 30803910 30803910 30803910 30803910 30803910 30803910 30803910 30803910 30803910 30803910 30803950 30803950 30803970 30803980 30803980 30803980 30803980 30803980 30803980
071D 071F 0720 0722 0724 0726 0727 0728 0729 072A 072C 072D 072E 0730	01 001 000 00 00 00 00 00 00 00 00 00	600005FA 6103 60000667 C4000621 04000032 081B 081E 081B D029 44000826 6113 C025 1800 C01F 7040	* * * * * * * * * * * * * * * * * * *	LDX STX LDX STO XIO XIO XIO STO BSI LDX LD RTE LD MDX ******	L1	PUNC DINT1 DINT1-1 3 INTEX XIT+1 ILPAT XIOXX XIOFD XIOSD DSWBY TIME /0013 DSWBY 16 DSWBY 16 DSWBY PUNC 2	CH AND CONTROL READER ROUTINE RESTORE DOUBLE INT * SWITCH SET DGUBLE INTRPT * EXPECTED SET INTERRUPT LEVEL * TRAP ADDRESS FEED AND PUNCH SAVF BUSY DSW PAUSE FOR INTERRUPT PRINT NO INTRPT ERR CH ROUTINE SET PUNCH INTRPT	SC	30803700 30803710 30803710 30803730 30803750 30803760 30803770 30803790 30803800 30803810 30803820 30803820 30803850 30803850 30803850 30803850 30803850 30803890 30803910 30803910 30803910 30803910 30803970 30803970 30803970 30803970 30803970 30803970 30803970 30803970 30803970 30803970 30803970 30803970 30803990 30803990 30803990 30803990 30804000 30804010

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PAPER TAPE READER/PUNCH FUNCTION TEST

	*		•	30B04050
0738 0 0809	XIO	XIOXX	PUNCH CHARACTER	30804060
	*			30804070
0734 0 080A	XIO	XIOSD	SAVE BUSY DSW	30804080
073A 0 D018	\$TO	DSWBY		30804090 30804100
0738 01 44000826		L TIME	PAUSE FOR INTERRUPT SC	30B04100 30B04110
0130 01 44000020	*	L TINE	TAUSE TON THIERROFT SC	30804120
0730 0 6112	LDX	1 /0012	PRINT NO INTRPT ERR	30804130
073E 0 C814	LDD	DSWBY		30804140
073F 0 E011	AND	POFF	,	30804150
0740 0 E80D	OR	DSWX2		30804160
0741 0 702F	MDX	DINE5		30804170
		********	*****	30804180
	*			30804190 30804200
0742 0000		E		30B04210
0742 1 080B	XIOXX DC	XCHAR	PUNCH IDCC	30804220
0743 0 1900	EC.	/1900		30804230
0744 0 0000	XIOSD DC	/0000	SENSE DSW IOCC	30804240
0745 0 1F01	DC	/1F01		30B04250
0746 0 0000	XIOFD DC	/0000	FEED IOCC	30804260
0747 0 1010	DC	/1C10		30804270
0748 1 080A	XIORR DC	CARED	READ IOCC	30804280
0749 0 1A00	DC DC	/1A00	DEADED MACK	30804290
074A 0 FEFF 074B 0 FBFF	RMASK DC XMASK DC	/FEFF /FBFF	READER MASK PUNCH MASK	30B04300 30B04310
074C 0 FFFF	DC DC	/FFFF	PUNCH MASK	30B04320
074D 0 0C00	DSWR2 DC	/0000	RDR BUSY EXP DSW	30B04320
074E 0 0300	DSWX2 DC	/0300	PCH BUSY EXP DSW	30804340
074F 0 0F00	DSWRX DC	/0F00	DOUBLE BUSY DSW EXP	30804350
0750 0 0100	ROFF DC	/0100		30804360
0751 0 0400	POFF DC	/0400		30804370
0752 0 0000	DC	/0000		30804380
0753 0 0000	DSWBY DC	/0000	LAST BUSY DSW	30804390
0754 0 0000	00	/0000	NOT USED	30804400
0755 0 0000	DSWAS DC	/0000	LAST DSWER PRINTLD	30B0441Q 30B04420
	*			30804420
	*	PRIN	T DSW ERRORS DETECTED	30B04440
	*		DURING INTERRUPT	30804450
	*			30804460
0756 01 65800667	NIPES LDX	Il INTEX	PRINT DSW ERROR	30B04470
0758 01 CC00065D		L CSWIT	* DETECTED WHILE	30804480
075A 01 E500074F		L1 ROFF-1	* RUNNING RTN 1 DR	30B04490
075C 01 ED000664		L1 INTEX-3	* RTN 2	30804500 30804510
075E 0 7105 075F 0 7011	MDX MDX	1 5 DINES		30B04510
0/3/ 0 /011	*	DINCS		30804530
	*			30B04540
0760 01 C400065D	DINE1 LD	L DSWIT	PRINT DSW ERROR	30B04550
0762 0 18D0	RTE	16	* DETECTED WHILE	30804560
0763 0 6108	LDX	1 8	* RUNNING RTN 3 DR	30804570
0764 0 700A	MDX	DI NE4	* RTN 4	30804580
0745 01 04000450	* DINES 1D 1	DCHTT	SEO SWE DED EDDOD	30804590
0765 01 C4000650 0767 0 18D0	DINE2 LD (RTE	L DSWIT 16	SEQ SVC REQ ERROR	30804600 30804610
0768 01 C400065E		L BUMRQ		30804620
076A 01 4C20076E		L DINE3,Z	BR IF 1ST SVC REQ OK	30804630
076C 0 6109	LDX	1 9	The second of the second	30B04640
07: D 0 7001	MDX	DINE4	•	30804650
	• •			30804660
076E 0 6110	DINE3 LDX	1 /0010		30804670
076F 01 C4000664		L INTED		30804680
0771 0 18D0	DINES RTE	16		30804690
0772 0 6200	LDX	2 0	ue.	30804700 30804710
0773 01 440007EC	BSI (L PRDSW	MC	30804710
	· · · · · · · · · · · · · · · · · · ·			30007120

PAPER TAPE READER/PUNCH FUNCTION TEST

0775									
	01	658005DD	DINE6	LDX	11	RID	RET TO MAINLINE RTN		30804
0777	0	C053		LD		ERRET			30B047
0778	01	4D980874		BSC	I 1	SORTS-1,+-	BR IF NO ERROR LAST		30B04
			*						30B047
077A	Ω	1810		SRA		16	RETURN TO FINISH		30B047
077B		DO4F		STO			* ALIGNING TAPE		308047
77C	-	7019		MDX			* IN READER		30B04
,,,,	U	1013	****				******		30B04
					+++		***************************************		
			*						30804
			*			CHECK	BUSY DSW		30B04
			*						30B04
770	01	65800667	BSYES	LDX	11	INTEX			30B04
77F	٥	COD3		LD		DSWBY	•		30B048
		E5000749		AND	1.1	RMASK-1			30804
		F500074C		EOR		DSWR2-1	•		30804
		4C18078E		BSC -		XBSE +-	BR IF DSW OK		30804
,,,,	01	40100700		550	-	ADJLY.			30B04
	_					DCUON	DOTALT DEL COOOD		308049
786		C8CC		LDD		DSWBY	PRINT DS4 ERROR		
		E500074F		AND		ROFF-1			30804
789	01	ED00074C		GR	Ll	DSWR2-1			30804
788	0	18D0		RTE		16			30804
78C	0	6200		LDX	2	0			30804
78D		405E		BSI		PRDSH		MC	30B04
	•		*					-	30804
78E	^	6100	XBSE	LDX	1	0	BLOCK PAUSE FOR INT		30B04
			VDSE	_			* ROUTINE REENTRY		30804
181	01	6D0005E5		STX	LI	WF 2CL+1	+ RUUIINE REENIRT		
_			*		_				30804
791	O C	4000000	XBSYX		L	/0000	BRANCH TO SOMEWHERE	PMO1	30B05
			****	*****	***	*******	******	1	308050
			*						30B05
			* *				•		30B050
			. *			COMP	ARE ROUTINE		308050
3793	Λ	0000	RDIT	DC		/0000		SE	30805
794		C075	ND11	LD		CARED			30805
							CALE LACT CHAR DEAD		30B05
795	U	D077		STO		LREAD	SAVE LAST CHAR READ		
	_		*						30B05
796	0	0881	READ	XIO		XIORR	READ		3.0805
			*						30805
797	0	C073		LD		XCHAR	DO CHARACTERS		30805
798	0	F071		EOR		CARED	* COMPARE		30805
799	0	1808		SRA		8			30805
		4C2007B1		BSC	L	RDIT2.Z	BR IF NON COMPARE		30805
		740107CC		MDX	ī		CK IF ALIGNED		30805
_					-	-	EXIT		30805
)79E		704B		MDX	_	RDITE			
)79F		682D		STX		N1ST	8 SEQ CHRS CORCT		30B05
		4107			1		BD 4NT TABE 4		2000-
7A0		6103		LDX	•	3	PRINT TAPE ALIGNED		
7A0		C86C		LDD	•	TPEAL	PRINT TAPE ALIGNED		30805
7A0 7A1	0				•	-	PRINT TAPE ALIGNED		30805 30805
7A0 7A1 7A2	0	C86C		LDD	٠.	TPEAL	PRINT TAPE ALIGNED CLEAR REALIGNMENT SW		30805 30805
7A0 7A1 7A2 7A3	0 0 01	C86C 406D C40005DE		LDD BSI LD		TPEAL PTLOG SWO	-		30805 30805 30805
7A0 7A1 7A2 7A3 7A5	0 0 01 0	C86C 406D C40005DE 100A		LDD BSI LD SLA		TPEAL PTLOG SWO 10	-		30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6	0 0 01 0	C86C 406D C40005DE 100A 180A		LDD BSI LD SLA SRA	L	TPEAL PTLOG SWO 10	-		30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6	0 0 01 0	C86C 406D C40005DE 100A		LDD BSI LD SLA		TPEAL PTLOG SWO 10	-		30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6	0 0 01 0 0	C86C 406D C40005DE 100A 180A D40005DE	*	LDD BSI LD SLA SRA STO	L	TPEAL PTLOG SWO 10 10 SWO	CLEAR REALIGNMENT SW		30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7	0 0 01 0 0 01	C86C 406D C40005DE 100A 180A D40005DE	* RDITD	LDD BSI LD SLA SRA STO	L	TPEAL PTLOG SWO 10 10 SWO	-		30805 30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7	0 0 01 0 0 01	C86C 406D C40005DE 100A 180A D40005DE 1810 D025	* RDJTD	LDD BSI LD SLA SRA STO SRA STO	L	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE	CLEAR REALIGNMENT SW		30805 30805 30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7	0 0 01 0 0 01	C86C 406D C40005DE 100A 180A D40005DE 1810 D025 C022	* RDJTD	LDD BSI LD SLA SRA STO SRA STO LD	L	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE KFFOO	CLEAR REALIGNMENT SW		30805 30805 30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7	0 0 01 0 0 01	C86C 406D C40005DE 100A 180A D40005DE 1810 D025	* RDJTD	LDD BSI LD SLA SRA STO SRA STO	L	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE	CLEAR REALIGNMENT SW		30805 30805 30805 30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7 7A8 7A8 7AC	0 0 01 0 0 01	C86C 406D C40005DE 100A 180A D40005DE 1810 D025 C022	# RDITD	LDD BSI LD SLA SRA STO SRA STO LD	L	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE KFFOO	CLEAR REALIGNMENT SW		30805 30805 30805 30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7 7A9 7A8 7AC 7AD	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C86C 406D C40005DE 100A 180A D40005DE 1810 D025 C022 D022 650001F4	‡ RDITD	LDD BSI LD SLA SRA STO SRA STO LD STO LD	L	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE KFFOO NOLNE 500	CLEAR REALIGNMENT SW		30805 30805 30805 30805 30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7 7A8 7AB 7AC 7AD	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C86C 406D C40005DE 100A 180A D40005DE 1810 D025 C022 D022 650001F4 6921	‡ RDJTD	LDD BSI LD SLA SRA STO SRA STO LD STO LDX STX	L L	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE KFFOO NOLNE 500 TRIAL	CLEAR REALIGNMENT SW		30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7 7A8 7A8 7AB 7AC	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C86C 406D C40005DE 100A 180A D40005DE 1810 D025 C022 D022 650001F4	* RDJTD	LDD BSI LD SLA SRA STO SRA STO LD STO LD	L L	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE KFFOO NOLNE 500	CLEAR REALIGNMENT SW		30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805
7740 7741 7743 7745 7746 7747 7749 7748 7748 7740 7740 7740 7740	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C86C 406D C40005DE 100A 180A D40005DE 1810 D025 C022 D022 650001F4 6921 7039		LDD BSI LD SLA SRA STO SRA STO LD STO LDX STX MDX	L L	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE KFFOO NOLNE 500 TRIAL RDITE	CLEAR REALIGNMENT SW		30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7 7A8 7AB 7AB 7AB 7AB 7AB	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C86C 406D C40005DE 100A 180A D40005DE 1810 D025 C022 D022 650001F4 6921 7039 C01B	* RDITD * RDIT2	LDD BSI LD SLA SRA STO LD STO LD STO LDX STX MDX LD	L L 1	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE KFFOO NOLNE 500 TRIAL RDITE	CLEAR REALIGNMENT SW RESET BIT LINE CHECK		30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7 7A8 7AB 7AB 7AB 7AB 7AB 7AB 7AB	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C86C 406D C40005DE 100A 180A D40005DE 1810 D025 C022 D022 650001F4 6921 7039 C01B 4C2007D2		LDD BSI LD SLA SRA STO LD STO LDX STO LDX STX MDX LD BSC	L L 1	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE KFFOO NOLNE 500 TRIAL RDITE N1ST RDIT4, Z	CLEAR REALIGNMENT SW RESET BIT LINE CHECK EXIT BR IF NOT FIRST ERR		30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7 7A8 7AB 7AB 7AB 7AB 7AB 7AB 7AB 7AB	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C86C 406D C40005DE 100A 180A D40005DE 1810 D025 C022 D022 650001F4 6921 7039 C01B 4C2007D2 62F8		LDD BSI LD SLA SRA STO LD STO LDX STX MDX LD BSC LDX	L L1 1	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE KFFOO NOLNE 500 TRIAL RDITE N1ST RDIT4, Z	CLEAR REALIGNMENT SW RESET BIT LINE CHECK		30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7 7A8 7AA 7AB 7AB 7AB 7AB 7AB 7AB 7AB	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C86C 406D C40005DE 100A 180A D40005DE 1810 D025 C022 D022 650001F4 6921 7039 C01B 4C2007D2		LDD BSI LD SLA SRA STO LD STO LDX STO LDX STX MDX LD BSC	L L1 1	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE KFFOO NOLNE 500 TRIAL RDITE N1ST RDIT4, Z	CLEAR REALIGNMENT SW RESET BIT LINE CHECK EXIT BR IF NOT FIRST ERR RESET CORRECT SW		30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805
7A0 7A1 7A2 7A3 7A5 7A6 7A7 7A9 7AA 7AB 7AB 7AB 7AB 7AB 7AB 7AB	0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C86C 406D C40005DE 100A 180A D40005DE 1810 D025 C022 D022 650001F4 6921 7039 C01B 4C2007D2 62F8		LDD BSI LD SLA SRA STO LD STO LDX STX MDX LD BSC LDX	L L1 1	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE KFFOO NOLNE 500 TRIAL RDITE N1ST RDIT4, Z	CLEAR REALIGNMENT SW RESET BIT LINE CHECK EXIT BR IF NOT FIRST ERR		30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805
7740 7741 7742 7743 7745 7746 7747 7749 7749 7749 7749 7749 7749	0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C86C 406D C40005DE 100A 180A D40005DE 1810 D025 C022 D022 650001F4 6921 7039 C01B 4C2007D2 62F8 6A16		LDD BSI LD SLA SRA STO LD STO LDX STX MDX LD LDX STX MDX	L L1 1	TPEAL PTLOG SWO 10 10 SWO 16 BTLNE KFFOO NOLNE 500 TRIAL RDITE N1ST RDIT4, Z -8 CORCT	CLEAR REALIGNMENT SW RESET BIT LINE CHECK EXIT BR IF NOT FIRST ERR RESET CORRECT SW		30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805 30805

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PAPER TAPE READER/PUNCH FUNCTION TEST

PAPER TAPE READER/PUNCH FUNCTION TEST

			* *		20005410
0790 0 0016	# 10	NOI NE	BIT LINE SHORT CK		30805410 30805420
0789 0 CO15 078A 0 E04F	LD AND	NOLNE Cared	BIT LINE SHORT CK		3 OBO 5430
07BB 0 D013	STO	NOLNE			30B05440
0.00 0 0013	*	MOENE	•		30B05450
07BC 01 74FF07D1	MDX L	TRIAL,-1	COUNT DOWN 100 MAX		30805460
07BE 0 7007	MDX	RDIT3			30805470
	*				30805480
07BF 0 6119	LDX	1 /19	•		30805490
07C0 0 6200	LDX	2 0			30805500
07C1 0 COOD	LD	NOLNE			30905510
07C2 0 18D0	RTE	16			30805520
07C3 0 COOC	LD	BTLNE			30805530
0704 0 4027	BSI	PRDSW	PRINT NO ALIGN ERROR		30B05540
07C5 0 70E3	MDX	RDITD		;	30805550
	*			:	308055 60
07C6 01 440006F0	RDIT3 BSI L	RRDY .	READER READY		308055 70
07C8 0 6802	STX	O ERRET			30B05580
07C9 01 4C00070A	BSC L	. FEED	CONTROL READER		30B05590
•	*				30B05600
	*	4000	DET TO DE		30B05610
0.7CB 0 0000	ERRET DC	/0000	RET TO READ IF SET		30B05620
07CC 0 0000	CORCT DC	/0000	TAPE ALIGNMENT		30B05630
07CD 0 0000	NIST DC	/0000	* WORK AREAS		308056 40
07CE 0 FF00	KFF00 DC	/FF00	SUDDIT CHAR CHECK HE		30805650
07CF 0 FF00	NOLNE DC	/FF00	SHORT CHAN CHECK WD		30805660
0700 0 0000	BTLNE DC	/0000	OPEN CHAN CHECK WD		308056 70 3080568 0
07D1 0 01F4	TRIAL DC	500	ERROR COUNTER		3080569 0
0303 01 C4000EDC	* RDIT4 LD L	SWO			30805700
07D2 01 C40005DE		. 3MU 9			30805 710
0704 0 1009	SLA		BR IF NO REALIGN		30805720
07D5 01 4C1007DA 07D7 0 1007	BSC L SLA	. KUI109-	OF IL NO VEWFIRM		30B057 30
0708 0 D0F4	STO	N1ST			30805 740
0709 0 7007	MDX	RDIT2			30B05750
0704 0 7007	* .	KUITZ			30B05760
	*	•			30805770
07DA 0 6114	RDIT6 LDX	1 /0014	PRINT DATA READ ERR		30B05780
07DB 0 C030	LD	LCHAR	THE THE TEND EN		30805790
07DC 0 F02E	EOR	XCHAR	•		30805800
07DD 01 4C1807E3		RDIT5,+-	BR IF BUF S/NB CNGD		36805810
O7DF O COZA	LD	CARED			30805820
07E0 0 F02C	EGR	LREAD			30805830
07E1 0 4818	BSC	+-	BR IF RDR BUF CNGED	21 - E	30805840
07E2 0 6115	LDX	1 /0015			30805850
07E3 01 6600087A		2 WASSB			30805860
07E5 0 CO25	LD	XCHAR			30805870
07E6 0 1898	SRT	24			308058 80
07E7 0 1088	SLT	8			30805890
07E8 0 CO21	LD	CARED			30805900
07E9 0 4002	BSI	PRDSW			30805910
	*				30805920
07EA 01 4C800793	RDITE BSC 1	RDIT			30805930
	********	********	******		30B05940
	*				30805950
					30805960
	*	PRINT	ERROR ROUTINE		30805970
		****			30805980
07EC 0 0000	PRDSW DC	/0000	PRINT ERROR RTN		30805990
07ED 0 6917	STX	1 EMESG+2	SAVE MESSAGE NUMBER		30806000
	*	FUE 65 - 5	CAME DATA HAR - CAT		30B06010
OTEE 0 D819	STD	EMESG+5	SAVE DATA WAS + S/B		30806020
	*	22	CAVE ALBUA ABBE		30806030
07EF 0 10A0	SLT	32	SAVE ALPHA ADRS		30806040
07F0 0 7200	MDX	2 0			30806050 30806060
07F1 0 CA00	LDD				30806070
07F2 0 D813	STD	EMESG+3	*******		30806080
	******** ** **				

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	-								,	
	.753			ED DEM	DC T		E0.000		sc	30806090
			44800012	ERDSW	DC	I	ERROR EMESG	MESSAGE ADDR *	30	30B06100
	07F5		0803		DC		CKDSX	BUSY RETURN ADDR *		30B06110
	07F6 07F7	_	07FB 07FB		DC		ERLOP	LOOP CN ERR ADDR *		30806120
	UIFI	T	0110	****	****	***	*********	******		30B06130
	07E8	01	658007EC	ERLOP	IDX	11	PRDSW	NORMAL + LOOP RETS		30806140
	07FA		7002	EKCO.	MDX	•••	PDSWX	Homme - Boot Hero		30806150
	•	•								30806160
	07FB	01	650007F3	CKDSX	LDX	L1	ERDSW	BUSY RETURN TO CALL		30806170
	07FD	01	6D0005E4	PDSWX	STX	Li.	MLSCF			30806180
	07FF	00	4C800011		BSC	1	START	_	MX	30806190
				*				•	•	30806200
	0802		0000		BSS	E				30306210
	0802		1000	TIMEX			/1000	COUNTER		30806220
	0803		0002	EMESG			/0002	WORD COUNT		30806230
	0804		0000		DC		/0000	HEX DUTPUT		30806240
	0805		0000		DC		/0000	MSG ID		30806250 30806260
		0	0000		DC .		/0000 /0000	ALPHA ADDR Alpha addr		30806270
	080 7 0808		0000 0000		DC DC		/0000	DSWAS		30806280
	0809		0000		DC		/0000	DSW S/B		30806290
	0003	U	0000	*			70000	031 370		30806300
										30806310
	A080	0	0000	CARED	DC		/0000	CHARACTER READ		30806320
	080B		0000	XCHAR			/0000	PUNCH OUTPUT CHAR		30806330
	2080		0000	LCHAR			/0000	PREVIOUS OUTPUT CHAR		30806340
	0800		0000	LREAD	DC		/0000	PREVIOUS CHAR READ		30806350
	080E		0000	TPEAL	DC		/0000			30806360
	080F	1	0890		DC		ATAPE			30806370
				*****	****	***	******	*******		30806380
				*						30806390
				*						30806400
				*			LOG	MESSAGE ROUTINE		30806410
		_	0000	# OTLOC	00		(0000		ME	3080642 0
	0810		0000	PTLOG	STX		/0000 LGMS+2	SAVE MESSAGE ID	ME	30806430 30806440
	0811	U	6911		21 X	ı	LUMSTZ	SAVE MESSAGE ID		30806450
	0812	0	D811	•	STD		LGMS+3	SAVE ALPHA MESSAGE		30806460
	OULL	•	0011	****		***		*****		30806470
	0813	00	44800013	PTL06	BSI	1	LOG	•	SC	30306480
	0815		0821		DC	•	LGMS	ADDR OF MESSAGE	_	30806490
	0816		081A		DC		PTLO2	BUSY RETURN ADDR .		30806500
	0817	0	0000		DC		/0000	RUN *		30806510
				*****	****	****	******	******		30806520
				*						30805530
	0818		COF7		LD		PTLOG	NORMAL RETURN		30806540
	0819		7001		MDX		PTLO1			30806550
		9	C005	PTL02			LGMS1	BUSY RETURN		30806560
			D40005E4	PTL01	_	Ė	MLSCF		44	30806570
	OBID	UU	40800011	*	BSC	1	START		MX	30806580 30806590
	0820		0000	•	BSS	Ε				30806600
	0820	1	0813	LGMS1		-	PTLO6			30806610
	0821		0000	LGMS	DC		/0000	WORD COUNT		30806620
	0822		0000		DC		10000	:		30806630
	0823		0000		סכ		/0000	MESSAGE ID NUMBER		30806640
	0824		0000		DC		/0000	ALPHA ADDR		30806650
	0825		0000		DC		/0000	ALPHA ADDR		30806660
				*****	****	***	********	***********		30806670
•				*						30806680
				*			TIMED	DELAY ROUTINE		3080669 0
		_		*						30806700
	0826		0000	TIME	DC		/0000		SE	30806710
			65001000		LDX		/1000	SET UP COUNTER		30806720
	0829		69D8		STX		TIMEX			30806730
	082A		74FF0802 7002		MDX	L	TIMEX,-1	•		30806740
			4C800826		MDX 8SC	1	TIMEL	EXIT TIME UP	SX	30806750 30806760
	0020	O I	70000020		\mathbf{c}	4	ITUE	ENTI TIME OF	J٨	20000100

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0826 0 0000 0827 00 65001000 0829 0 65D8 082A 01 74FF0802 082C 0 7002 082D 01 4C800826

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PAPER TAPE READER/PUNCH FUNCTION TEST

				4
082F 01 6600082A	TIME1 LDX	L2 TIME+4	SET FOR REENTRY	30806770
0831 01 6E0005E5	STX	L2 MLSCF+1		30806 780
0833 00 40800011		I START		30806790
		*******	******	30806800
	*			30806810
	*	ROIL	D NEXT CHARACTER	30806820 30806830
	*	•	ROUTINE	30805840
0835 0 0000	MARK DC	/0000		SE 30806850
0836 0 COD4	LD	XCHAR	SAVE LAST CHARACTER	30806860
0837 0 1808	SRA	8	SAVE EAST SHARROTER	30806870
0838 0 1008	SLA	8		30806880
0839 0 DOD2	STO	LCHAR		30806890
	*			30806900
083A 00 65000001		L1 1	INIT TEST XR1	30806910
083C 00 66000000		L2 0	XR2	30306920
083E 01 4E800866		I2 WHAT	GO BUILD CHARACTER	30806930
	*		CT. 10 T. 11511 D. 1001 C	30806940
0840 01 C500086A		L1 BITSX	START NEW RIPPLE	30806950 30806960
0842 0 DOC8	STO	XCHAR	* PATTERN	30806970
0843 0 6201 0844 0 701D	HDX HDX	2 1 EXITX		30806980
0844 0 7010	*	EALIA		30806990
0845 0 COC5	SRIPX LD	XCHAR	SHIFT RIPPLE PATTERN	30807000
0846 0 1001	SLA	1		30807010
0847 0 DOC3	STO	XCHAR		30807020
0848 0 4820	BSC	Z	SKIP NEXT CH NO BITS	30807030
0849 0 7018	MDX	EXITX		30807040
084A 0 6202	LDX	2 2		30807050
084B 0 CO1E	LD	BITSX	PLACE ALL BIT CHAR	30807060
084C 0 DOBE	STO	XCHAR		30807070
084D 0 6925	STX	1 COUNA		30807080 30807090
084E 01 74FF0873	EARX MDX	COUNT -1	SKIP WHEN COUNT GO O	30807100
0850 0 7011	MDX	L COUNX,-1 EXITX	SKIP WHEN COUNT GO O	30807110
0851 0 6200	LDX	2 0		30807120
0852 0 7101	MDX	1 1		30807130
0853 0 6920	STX	1 KOUNX		30807140
0854 01 74F80874	•	L KOUNX,-8	SKIP EXCEPT END RIPPE	30807150
0856 0 7001	MDX	ENRIX	BR TO END RIPPLE ROUT	30807160
0857 0 700A	MDX	EXITX	BR TO EXIT	30807170
	*		·	30807180
0858 0 6203	ENRIX LDX	2 3	END RIPPLE PATTERN	30807190
0859 0 7008	MDX ±	EXITX		30B07200 30B07210
0054 0 5010	ALLBX LD	COUNX	ALL CHARS PATTERN	30807220
085A 0 CO18 085B 0 DOAF	STO	XCHAR	ALL CHARS PATTERN	30807230
085C 0 800E	A	ONEEX	ADD ONE 1. E. 0100	30807240
085D 0 D015	ŝto	COUNX		30807250
085E 01 4C200862		L EXITX,Z		30807260
	*	• =		30807270
	*			30807280
0860 0 6101	LDX	1 1	REINITIALIZE	30807290
0861 0 6200	LDX	2 0	s de la companya de l	30807300
0862 0 6908	EXITX STX	1 DUI P-1		30807310
0863 0 6AD9	STX	2 DULP+1	Futt	30807320
0864 01 4C800835	BSC *	I MARK	EXIT	SX 30B07330 30B07340
	•			30807350
0866 1 0840	WHAT DC	NRIPX	RECORD CONTROL ADRS	30807360
0867 1 0845	DC	SRIPX	RECORD CONTROL HORS	30B07370
0869 1 084E	DC	BARX		30807380
0869 1 085A	DC	ALLBX		30807390
	* *			30807400
	*			30807410
086A O FF00	BITSX DC	/FF00	CHARACTER PATTERN	30807420
086B 0 0100	ONEEX DC	/0100	* CONSTANTS	30807430
086C 0 00C0	DC	/0000		30807440
DATE 02JAN66	01MAY66			PROG ID
EC NO. 415490	4154908			PAGE

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PAPER	TAPE	READER	/PUNCH	FUNCTION	TEST
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)89C		44800015	TEND	BSI	I END	END PROGRAM	* SC	308081
89C					****		***	308080
89C	-		*			•		30B080
		FFFF		DC	/FFFF			308080
89A 89B		3400 3000		DC	/3400 /3000			30B080
899		7400		DC DC	/7400			308080 308080
898		1400		DC	/1400			308080
897		2000		DC	/2000			308080
896		5C00		DC	/5C00			308080
895		3000		DC	/3C00			308080
894		2100		DC	/2100			30807
893		3400		DC	/3400	•		30807
891 892		5400		DC	/5400			30807
890		9C00 3C00	ATAPE	DC DC	/9C00 /3C00	TAPE ALIGNED		308079 308079
	_	0000	*	00	10000	TARE ALTONER		30B079
88F	0	FFFF		DC	/FFFF			30807
88E		2600		DC	/2600			308079
88D	0	1E00		DC	/1E00			308079
88C	0	5600	APCH	DC	/5600	PCH		30807
	•	- • • •	*		••••	•		30807
88B	0	FFFF		DC	/6200 /FFFF	•		30807
889 88A	0	5200 6200		DC	/5200 /6200			30807
888		6200		DC DC	/6200 /5200			30B078
887		6200		DC	/6200			308070
886		3600	AERR	DC	/3600			308078
			*					306076
885		FFFF		DC	/FFFF			308076
884		6200		DC	/620 0			30807
883		3200		DC	/3200			308077
882	0	6200	ARDR	DC	/6200	RDR ERROR		30807
- J I	•	-	*					30807
881		0886	non.	DC	AERR			30807
880		0882	RDR	DC	ARDR			308077
87E 87F	-	088C	PARUT	DC	ANRDY			308077
87D 87E		004B 088C	PNRDY	DC	ANRDY APCH			308077 308077
	1	0882	RNRDY		ARDR			308077
87B		0054		DC	ASB			30807
87A		0060	WASSB		AWAS			308076
87A		0000		BSS	E			308076
			*		<u> </u>	· · · · · · · · · · · · · · · · · · ·		308076
			*			TORAGE AREAS		308076
			*		Δ1 5	PHABETIC MESSAGE		308076
879	ī	0600		DC	RTN5A	MODITIE 3		308076
	1	0699		DC DC	RTN4A	ROUTINE 4 ROUTINE 5		308076 308076
877		0683		DC	RTN3A	ROUTINE 3		308076
876		0679		DC	RTN2A	ROUTINE 2		308076
875	1	0672	SORTS		RTN1A	ROUTINE 1		30B075
			*			MAINLINE AFTER INTRP		30B075
			*		ΔDI	RESSES FOR RETURN TO	ם ٔ	308075
			.*					30B075
			*	*****	********			308075
874	0	0000	KOUNX		/0000	********	***	308079 308079
873		0000	COUNX		/0000	WORK AREAS		308079
			•					308075
872		OOFF		DC	/00FF			30B079
871	ŏ	OOFE		DC	/00FE			308074
								308074
						•		308074 308074
870	0 0 0	00E0 00F0 00F8 00FC			DC DC DC DC	DC /00F0 DC /00F8	DC /00F0 DC /00F8	DC /00F0 DC /00F8

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PAPER TAPE READER/PUNCH FUNCTION TEST

08A0 0622 END PTB0

30808130

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PAPER TAPE READER/PUNCH FUNCTION TEST

CROSS REFERENCE LISTING

	SYMBOL	VALUE	REFERENCES
	ADSCT	0058	0000
	AEND	0037	0000
	AERR	0886	0881
	AINT	0044	0000
			0000
	AIVD	003B	
	ALD	003E	2000
	ALLBX	085A	0869
	ANINT	0041	0000
	ANRDY	004B	0000,087D,087F
	APCH	088C	087E
	AQ5A	0019	
	ARDR	0882	087C,0880
	ARDY	004C	0000
	ASB	0054	0000,087B
	ASCT	005A	0000
	ASWS	0050	0000
	ATAPE	0890	09 0F
	AWAS	0060	087A
	BARX	084E	0868
	BEGIN	0013	0000,0622
	BITSX	086A	0840,0848
	3SYES	077D	0617
	BTLNE	07D0	07AA,0786,0788,07C3
	BUMRO	065E	0610,0768
	CARED	080A	0695,0748,C754,0798,07B7,C7BA,O7DF,O7E8
	CKDSX	07FB	07F6
	CORCT	07CC	C64D,079C,C785
	COUNX	0873	084D,084E,C85A,O85D
	CRASH	06CD	0672,067B,C685,06D3
	DINEL	0760	0603
	DINEZ	0765	060B
	DINES	076E	076A
	DINE4	076F	0764.076D
	DINES	0771	071A,0730,0741,075F
	DINE6	0775	0615
	DINT	05F8	0661
	DINT1	05FB	0613,071B,C71D
	DINT2	0606	0611
	DINT4	060E	05FE
	DSWAS	0755	CGDE,06E8,C6F8,0702
	DSWBY	0753	0713,0717,C729,072D,073A,073E,077F,0786
	DSWDI	0662	05FB,0600
	DSWID	0663	05FD,0606
	DSWIT	065D	05EA,0607,0758,0760,0765
	DSWRX	074F	072F
	DSWR2		
		074D	0719,0782,0789
	DSWX2	074E	0740
	DULP	083C	0643,0646,0862,0863
	EMESG	0803	05A7,06AB,C7ED,O7EE,O7F2,O7F5
	END	0015	0000,C89D
	ENRIX	0858	0856
	ERDSW	07F3	07FB
	ERLOP	07F8	07F7
	ERRET	07CB	068C,0777,C77B,07CB
	ERROR	0012	0000,07F3
	ETRAP	0018	0000,0610
ċ	EXITX		
		0862	0844,0849,0850,0857,0859,085E
	FEED	070A	0677,0709
	HALT	0014	0000
	HANDL	065F	05ED
	ILCRP	0030	0000
	ILIR	0036	0000
	ILPAT	0032	0000,061E,070F,0724,0736
	ILO	0028	0000
	ILI	0029	0000

PAPER TAPE READER/PUNCH FUNCTION TEST

PAPER TAPE READER/PUNCH FUNCTION TEST

```
IL2
        002A
                  0000
IL3
        002B
                  0000
IL4
        002C
                  0000
INTED
        0664
                  05F8, C5FC, C608, 076F
                  C5EB, O5EF, O5F1, 070B, 0720, 0732, 0756, 075C, 077D
INTEX
        0667
KFFOO
        07CE
                  07AB
KOUNX
                  0853,0854
        0874
LCHAR
        080C
                  07DB,0839
LGMS
        0821
                  0811,0812,0815
LGMS1
       0820
                  081A
LOG
                  0000,0913
        0013
                  0000
LOGBY
        0016
                  0795,C7E0
LREAD
        0800
MARK
                  066D,0674,067D,0864
        0835
MGR
                  05E3,062C
        0631
                  C689,C693,O6BD,O6C2,O6D1
O619,O62E,O78F,O7FD,O81B,O831
MGR1
        0633
MLSCF
        05E4
NIPES
        0756
                  05F5
NOLNE
        07CF
                  07AC,07B9,C7BB,07C1
NRIPX
        0840
                  0866
                  C62A,079F,C7B1,07D8
NIST
        07CD
ONEEX
        0868
                  085C
PUSWX
        07FD
                  C6DB, C6F5, C7FA
PID
        05DC
                  0624,0633,0635,063A,089F
PINTI
                  05F7,0605,C60D
        0617
PINT3
                  05F3,0601,0609
        0615
PNRDY
        087E
                  C6E3
                  06E9,073F
POFF
        0751
POINT
        05E7
                  0620
PRDSH
        07EC
                  06A9,06EB,0705,0773,078D,07C4,07E9,67F8
PTBGN
        0622
                  08A0
                  05E2.062F
PTILZ
        0625
                  0682,07A2,0818
PTLOG
        0810
PTLG1
        0818
                  C819
PTL02
        081 A
                  0816
PTL06
        0813
                  0820
                  0670,06CA
        0731
PUNH
RASH
                  06D0
        06D3
RDIT
        0793
                  0679,0683,C7EA
RDITD
        C7A9
                  07C5
ROITE
        07EA
                  C79E,07BO
RDIT2
        07B1
                  C79A,07D9
RDIT3
        0706
                  07BE
RDIT4
        07D2
                  0782
RDIT5
        37E
                  07DD
RDIT6
        07DA
                  07D5
                  C6A5,06B0
RDR
        0880
                  C77C
READ
        0796
REQST
        06AF
                  06B8
                  C632,063A,063B,063F,0775
RID
        05DD
RMASK
                  0668,06F9,0780
        074A
RNRDY
        087C
                  06FD
ROFF
                  C703, C718, 075A, 0787
        0750
RQKB
        0034
                  0000
RQTY
        0033
                  0000
RRDY
        06F0
                  0576,0680,0696,06F3,06FA,0709,07C6
RSTKB
                  0000
        0017
RTCON
                  0640,0653
        0655
RTN1
        066D
                  0673
RTN1A
        0672
                  0875
RTN1I
        066A
                  0655
RTN2A
        0679
                  C876
                  0656,067C
RTN21
        0674
RTN3A
        0683
                  0877
                  C657,0686
RTN3I
        067D
RTN4
        0690
                  06A2,06BA
RTN4A
        0699
                  C878
RTN4I
        0687
                  0658
```

RTN5	06BF	06CC
RTNSA	0600	C879
RTN5I	0688	0659
SINT	05EF	065F,0660
SORTS	0875	0778
SRIPX	0845	0867
START	0011	0000,07FF,C81D,0833
SVKB	0035	0000
SWCMP	065C	0636,0692,0601
SWO	05DE	0626,06AD,06B6,06D7,06F1,07A3,07A7,07D2
SW1	05DF	0635,0687,C690,O6BB,O6BF
SW2	05E0	
SW3	05E1	06C4
TEND	089D	065A,065B
TIME	0826	06B4,06ED,C707,0714,072A,073B,082D,G82F
TIMEX	0802	0829,082A
TIME1	082F	082C
TPEAL	080E	07A1
TRIAL	07D1	0651,07AF,C7BC
WASSB	087A	07E3
WHAT	0866	083E
WRECK	06D5	064A,066C,06CE
XESE	078E	0784
XBSAX	0791	061A
XCHAR	080B	068E,069D,06C7,0742,0797,07DC,07E5,0836,0842,0845,
		0847,084C,C85B
XFEED	071B	0681,0697
XIOFD	0746	0711,0727
XIORR	0748	0699,0796
XIOSD	0744	05E8,06A0,06DD,06F7,0712,0728,0739
XIOXX	0742	0726,0738
XIT	0620	0614,G70D,C722,O734
XKRDY	06.D6	066F,067F,0695,06C9,06D9,06E0,06EF
XMASK	074B	0669,06DF

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			\mathbf{e}	3		
IBM	MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. 2191222	0	0	IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PART NO PAGE). 219122 1
		PAGE 1	6	S		•
113	2 PRINTER FUNCTION TEST		_	0	1132 PRINTER FUNCTION TEST	
	TABLE OF CONTENTS		១	0	1. PURPOSE	
	INDE OF CONTENTS		0	\circ		
PAR	AGRAPH	PAGE			TO PROVIDE A CHECKOUT OF ALL PRINTER FUNCTIONS. ALL TESTS ARE CONDUCTED UNDER CONTROL OF THE DIAGNOSTIC MONITOR. HENCE. THE PRINTER FUNCTIONS CAN BE	
1.	PURPOSE	01A	រី	1	PERFORMED EITHER ALONE OR WHILE OTHER I/O DEVICES ARE OPERATING. (OVERLAP)	
2.	PREREQUISITES	01A	ð	i)	2. PRERECUISITES	
	2.1 PROGRAM			_	2-1 PROGRAM	
3.	USE PROCEDURE	01A	១	O .	THIS PROGRAM LOADS AND IS RUN UNDER CONTROL OF THE 1130 DIAGNOSTIC MONITOR.	
	3.1 LOADING 3.2 OPERATION 3.3 TERMINATION		อ	- }	AN 1132 CARRIAGE TAPÉ IS NEEDED IN ORDER TO RUN ROUTINE 4. ORDER PART NO 2191276, OR IF DESIRED, TO MAKE THE TAPE-	
4 -	PRINTCUTS	03	0	7	1. CUT TOPE TO LENGTH OF 66 LINES. 2. PUNCH CHANNEL. 1 IN LINE 1	
	COMMENTS		0	\circ	2 IN LINE 9 3 IN LINE 17	
-	5.1 DETAILED DESCRIPTION OF ROUTINES			_	4 IN LINE 25 5 IN LINE 33	
6.	APPENDIX	05	O ·	0	6 IN LINE 41 9 IN LINE 49	
•	6.1 SAMPLE PRINTOUTS		0	<u>)</u>	12 IN LINE 57	
	6.1.1 ROUTINE 5 PRINTOUT 6.1.2 ROUTINE 6 PRINTOUT				3. USE PROCEDURE	
	College Root Inc. of Randon		Ċ	つ	3.1 LOADING	
			0	0	THIS PROGRAM FOLLOWS THE LOADING PROCEDURES ESTABLISHED BY THE 1130 DIAGNOSTIC MONITOR. REFER TO D. M. DOCUMENTATION.	
			n	.	3.2 OPERATION	
			, ,	· · ,	3-2-1 PROGRAM EXECUTION	
			<u></u>	う	A. LOAD AND GO MODE	
			a	0	ALL ROUTINES WILL BE EXECUTED WITH NO OPTIONS ALL DETECTED ERRORS WILL BE IDENTIFIED BY AN ERROR TYPEOUT.	
				0	B. SINGLE PROGRAM AND OVERLAP MODE	
				0	AFTER PROGRAM IS LOADED, THE MONITOR WILL WAIT TO ALLOW OPTIONS TO BE SPECIFIED.	
			0	O .	1. SPECIFY DESIRED OPTIONS AS INSTRUCTED IN SECTION 3.2.2. IF NO OPTIONS ARE DESIRED, NO ENTRY IS REQUIRED.	
			อ)	2. TO START EXECUTION - EXECUTE MODE MUST BE SPECIFIED	
			ี	\sim	SET BIT SWITCHES FOR DESIRED MODE	* *
				2	SW. SETTING CONTROL	
			9		0080 EXECUTE WITH NO OPTIONS	
			g -	1	0082 HALT ON ANY ERROR 0084 BYPASS ALL ERROR PRINTOUTS 0088 LOOP ON ERROR	
			១)	008C LOJP ON ERROR AND BYPASS ALL ERROR PRINTOUTS 0090 LOOP ALL PROGRAMS 0092 LOOP ALL PROGRAMS AND HALT ON ERRORS	
			១	0	PRESS INTERRUPT REQUEST KEY	•

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DATE 02JAN66 01MAY66 01JUL66 EC NO. 415490 415490B 415490C PROG ID 030C-* PAGE 1 DATE 02JAN66 01MAY66 01JUL66 EC NO. 415490 415490B 415490C PROG ID 030C-+ PAGE 1A

0 0 PART NO. 2191222 IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM 0 **0** 1132 PRINTER FUNCTION TEST () 3.2.2 PROGRAM OPTIONS THE OPERATOR MAY MODIFY THE EXECUTION OF THE PROGRAM ANY TIME BEFORE OR AFTER IT HAS STARTED EXECUTION BY ENTERING PROGRAM CONTROL OPTIONS OR ROUTINE SELECTION OPTIONS. A. PROGRAM CONTROL OPTIONS 1. TO SELECT PROGRAM OPTIONS SET BIT SWITCHES AS INDICATED SW. SETTING CONTROL RESET ALL CONTROL OPTIONS HALT 1132 PRUGRAM (TO START AFTER HALT, 0001 SET SWS TO DESIRED CONTROL OPTION OR OCOO. THEN PRESS INTERRUPT REQUEST KEY.) LOOP AN 1132 ROUTINE OC 20 2. PRESS INTERRUPT REQUEST KEY. B. SPECIAL OPTIONS 2. LOCK ON PATTERN IN ROUTINES 5 AND 6, THE OPERATOR CAN LOCK ON ANY PATTERN IN THAT ROUTINE BY SPECIFYING THE START CHARACTER FOR THE LINE. FOR ROUTINE 5, THIS WILL RESULT IN **()** A RIPPLE PATTERN THAT DOES NOT ROTATE. TO SPECIFY CHARACTER. SET SWITCHES TO SCXX WHERE XX IDENTIFIES THE 0 0 CHARACTER AS FOLLOWS - THEN PRESS INTERRUPT REQUEST. 0 7 XX CHARACTER 0 01 02 03 0 () 04 05 06 \mathbf{O} \mathbf{O} 07 08 09 0 0 OA 08 OD OE OF 10 0 19 14 18 10

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PART NO. 2191222 PAGE

1132 PRINTER FUNCTION TEST

0

XX	CHARACTER
10	P
16	Q
1F	R
20	· €
21	G
22	W -
. 23	X
24	Y
25	Z
26	A
27	B
28	Ç
29	0
2A	F
2B	H
2C	Ī
20	S T
2E	
2F	Ü
30	V

3. MODIFY SPACE TIMING

IN ROUTINES 5,6 AND 7, THE PROGRAM WILL NORMALLY WAIT 36 IDLES BEFORE GIVING A SPACE COMMAND. THIS CAN BE INCREASED OR DECREASED BY SETTING THE SWITCHES TO CCXX, WHERE XX IS A HEX NUMBER EQUAL TO THE DESIRED NUMBER OF IDLES.

C. ROUTINE SELECTION

EXECUTION WILL START WITH THE SELECTED ROUTINE.

1. TO SELECT ROUTINE OPTIONS SET BIT SWITCHES AS INDICATED

SW. SETTING ROUTINE

EMIT SEQUENCE AND DSW TEST PRINT SCAN INCOMPLETE TEST 4C02 SPACE TEST 4003 SKIP TEST 4C05 ROTATE PATTERN 4006 PRINT ALL CHARACTERS 4C07 FAST PRINT

2. PRESS INTERRUPT REQUEST KEY.

TERMINATION

IF THERE ARE NO 'LOOP' CONTROL OPTIONS SELECTED, THE PROGRAM WILL TERMINATE AFTER ONE PASS. IF OPTIONS TO LOOP HAVE BEEN SELECTED. THE PROGRAM MAY BE TERMINATED BY.

- 1. REMOVE LOOP OPTIONS AND ALLOW NORMAL TERMINATION.
- 2. SET ENTRY SWITCHES TO 400C AND PRESS THE INTER. RFQ. KEY.

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IBM MAIN	TENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PART NO. 2191222	•	0	IBM MAINTENANCE
	PAGE 3	· 5	0	
1132 PRI	NTER FUNCTION TEST	•		1132 PRINTER FUN
3.4	RESTART	 5 ∙	0	
201	TO RESTART THE PROGRAM.	3 :	0	EDCO9 OO
	1. SET SWITCHES TO 408C. 2. PRESS INTERRUPT REQUEST KEY. 3. SET SWITCHES TO 0080.	3	19	NOTE.
	4. PRESS INTERRUPT REQUEST KEY.	3		
	NOTE			EOC10 O 0
	DEPENDING ON HOW THE PROGRAM WAS TERMINATED. THE LAST TWO STEPS MAY NOT BE REQUIRED.	5	()	EXPEC CORRE
4. PRIN	TCUTS	₽	,	EOC11 00
	ALL PRINTOUTS ARE IN THE STANDARD FORMAT.	6)	INCOR CORRE
	APPNN OORR (MESSAGE) OR		! 	
	EPPNN OORR (MESSAGE)	Û,		F0C12 00
	WHERE A IDENTIFIES STATUS MESSAGES E IDENTIFIES ERROR MESSAGES PP IS THE PID OF THE PROGRAM CAUSING THE MESSAGE	0)	ERROR INTER
	NN IS THE MESSAGE SEQUENCE NUMBER RR IS THE ROUTINE NUMBER MESSAGE IS ANY VARIABLE INFORMATION	0	O ,	EOC13 OC THIS Modif
4.1	NOPMAL PRINTOUTS	O	· O	SHOUL IDENT
AO	DSW CC1 OORR XXXX NRDY	0	0	SHOUL BY A
	BIT 5 ON IN DSW. NCRMALLY TURNED ON BY FORM CHECK OR PRINTER NOT READY.	o	o	5. COMMENTS 5.1 THE F
AO	CFF OORR END	0	2	ROUTINE 01
	THE PROGRAM HAS TERMINATED. TO RESTART, SEE SEC. 3.4.	9	0	
4.2	ERROR PRINTOUTS			
E	DSW OCO4 OORR XXXX NO INTRPT THE FIRST READ EMITTER INTERRUPT AFTER A "START PRINTER" COMMAND DID	0	()	
	NOT OCCUR.	0	10	
E	DSW DCOS OORR XXXX NO INTRPT SKIP RESPONSE INTERRUPT DID NOT OCCUR.	0)	ROUTINE 02
E	DSW DCO6 OORR XXXX NO INTRPT SFACE RESPONSE INTERRUPT DID NOT OCCUR.	ን	<i>'</i> ')	
	DSW EMIT EMIT	0	()	
E	WAS S/B DCO7 OORR XXXX XXXX XXXX INVLD EMIT WAS S/B Incorrect Characters emitied. See note under eoco9 for	0	7	
	RECOMMENDED ACTION.	0)	
E	DSW DCO8 OORR XXXX NO INTRPT THE FIRST READ EMITTER INTERRUPT OCCURED AFTER A "START PRINTER" COMMAND, BUT ONE OF THE LATER READ EMITTER INTERRUPTS WAS LOST.	σ		
•		0	n	
DATE EC NO.	02JAN66 01MAY66 01JUL66 PROG ID 030C-* 415490 415490B 415490C PAGE 3	0	0	DATE 02JAN6 EC NO. 415490

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DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PART NO. 2191222

INCTION TEST

REAL ENTE INVLD ENTE ITER STARTED. FIRST EMIT CHARACTER WAS NOT VALID.

IF THIS ERROR PERSISTS, ENTER 0084 IN SWITCHES. THIS WILL BYPASS ERROR TYPEOUT. THE PRINTER WILL THEN PRINT, AND IN ROUTINES 4 AND 5; ANY LINE BEGINNING WITH AN INVALID CHARACTER WILL BE SKIPPED.

DSW CHAN XXXX XXXX CHANNEL CTED CARRIAGE CHANNEL BIT DID NOT APPEAR IN DSW. MUST USE RECT CARRIAGE TAPE TO AVOID THIS ERROR ON A GOOD MACHINE.

XXXX INVLD DSW PRRECT DSW. PRINTER SHOULD BE OFF WHEN THIS DSW IS SENSED. THE ECT OSM SHOULD BE OOXX, WHERE XX IS CHANNEL CONTROL BITS.

DSW DSW WAS S/B XXXX XXXX INVLD DSW OR IN DSW FOLLOWING INTERRUPT. THIS DSW IS SENSED IN THE RRUPT ROUTINE, AND AT LEAST ONE RESPONSE BIT SHOULD BE ON.

XX00 XX00 EMIT ERROR ERROR WILL OCUR IF ANY EMIT BIT IS MISSING OR ALWAYS ON. FIERS A AND B IDENTIFY THE BIT OR BITS IN ERROR. MODIFIER A JLD BE FFOO IF NO EMIT BITS ARE MISSING. A MISSING BIT WILL BE ITIFIED BY A O IN BIT POSITION OF MISSING BIT. MODIFIER B JLD BE 0000. ANY EHIT BIT WHICH IS ALWAYS ON WILL BE IDENTIFIED 1 IN THE BIT POSITION OF THE EMIT BIT IN ERROR.

FOLLOWING IS A MORE DETAILED DESCRIPTION OF EACH ROUTINE.

IDLE THE PRINTER FOR 100 READ EMITTER INTERRUPTS. ERROR DETECTION-

- 1. LOSS OF AN INTERRUPT
- 2. EMITS OUT OF SEQUENCE
- 3. INVALID CHARACTER FOR FIRST EMIT
- 4. DSW INCORRECT AFTER AN INTERRUPT

IDLE THE PRINTER FOR 100 READ EMITTER INTERRUPTS. SET BIT 15 TO ZERO IN STORAGE LOCATION 0027 WHICH WILL FORCE A *PRINT SCAN CHECK .. ERROR DETECTION -

- 1. LOSS OF AN INTERRUPT
- 2. EMITS OUT OF SEQUENCE
- 3. INVALID CHARACTER FOR FIRST EMIT
- 4. DSW INCORRECT AFTER AN INTERRUPT

02JAN66 Olmay66

PART NO. 2191222 IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM 1132 PRINTER FUNCTION TEST SPACE THE CARRIAGE SO TIMES. THE PRINTER WILL NOT BE STARTED. ROUTINE 03 1. LOSS IF INTERRUPT AFTER EACH SPACE. 2. DSW INCORRECT START THE CARRIAGE AND CHECK THAT EACH CARRIAGE CHANNEL CAN BE DETECTED IN THE DSW. THE CARRIAGE IS STARTED AND STOPPED ROUTINE 04 FOR EACH CHANNEL. ERROR DETECTION -1. LOSS OF AN INTERRUPT 2. DSW INCORRECT PRINT 49 LINES IN A ROTATING PATTERN. CHECK THAT ALL OF THE ROUTINE 05 CHARACTERS ARE EMITTED IN THE PROPER SEQUENCE THIS ROUTINE COMPARES THE EMITTER CHARACTER WITH THE DESIRED CHARACTER ONLY FOR THE FIRST CHARACTER IN EACH LINE. WHEN A COMPARISON IS FOUND, A ONE IS FLOATED ACROSS THE PRINT BUFFER - SHIFTING RIGHT ONE WITH EACH INTERRUPT RECEIVED. THE RIPPLE IS THUS PRINTED IN EMIT SEQUENCE. 120 EMITS REQUIRED TO PRINT A FULL LINE. ERROR DETECTION -1. LOSS OF AN INTERRUP! 2. EMITS OUT OF SEQUENCE 3. INVALID CHARACTER FOR FIRST EMIT PRINT ONE LINE OF EACH CHARACTER. CONTINUE UNTIL ALL ROUTINE 06 CHARACTERS HAVE BEEN PRINTED ONCE. ERROR DETECTION-1. LOSS OF AN INTERRUPT 2. EMITS OUT OF SEQUENCE 3. INVALID CHARACTER FOR FIRST EMIT FAST PRINT ROUTINE. (APPROXIMATELY 140 LINES PER MINUTE). PRINTS 100 LINES. THE ROUTINE IS USED TO EXPOSE MARGINAL ROUTINE 07 ELECTRO/MECHANICAL PROBLEMS IN THE PRINTER. ERROR DETECTION-1. LOSS OF AN INTERRUPT 2. EMITS OUT OF SEQUENCE 3. INVALID CHARACTER FOR FIRST EMIT

DATE 02JAN66 01MAY66 01JUL66 EC :.D. 415490 415490B 415490C PROG ID 030C-+ PAGE 4 Ø

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18M MAINTENANCE DIAGNOSTIC PROGRAM F	NY INE 1130 242 JEM	PART NO. 2191220 PAGE 1		. 0	IBM MAINTENANCE DI	AGNOSTIC PROGRAM FOR THE	1130 SYSTEM	PART NO. 2191220 Page 1A
			0					
1132 PRINTER FUNCTION TEST			O	0	1132 PRINTER FUNCT	ION TEST		
		· •						
		2000000	0	0				305004.00
0000 DRG *+1!	500	30C10000 30C00010			·05F2 01 65000632 05F4 00 6D000029	LDX L1 PIRT STX L1 IL1	SET INTERRUPT ADRS	30C00680 30C00690
•	PROG TRANSFER VECTOR	30C000 20	. O	0	05F6 01 4C9005EB	BSC I PRSET		30000700
* 0010 BEGIN EQU 16		30C00030 30C00040		1.		* * START OF TEST		30C00710 30C00720
	IN+1	30000050	0	0		*		30C00730
0012 ERROR EQU STA	RT+1	30000060			05F8 00 65000001	PRDIA LDX E1 1	SET TO START	30000740
0013	DR+1 +1	30 C00 0 70 30 C0 0 8 0	0	0	05FA 0 691B 05FB 0 6164	STX 1 CN12+1 LDX 1 100	AT 1ST ROUTINE	30C00750 30C00760
0015 END EQU HAL		30C000 9C		:	05FC 01 600007AB	STX LI EMTCT	SET EMIT CHECK CNT	30C00770
* * * * * * * * * * * * * * * * * * *	• •	30 C00 1 00	0		05FE 01 CC0007AE	LDD L ANDOR	CCT EMIT OF CONSTANT	30C00780 30C00790
0016 LDGBY EQU END 0017 RSTKB EQU LDG	*1 BY+1	30C00110 30C00120	•	, O	0600 01 DC0007AC 0602 0 6100	STD L ANDEM LDX 10	SET EMIT CK CONSTANT	30 C00 800
0018 ETRAP EQU RST	K8+1	30000130	_	•	0603 0 69DC	STX 1 BSW2	RESET CHAR SELECT	30000820
0019 AQ5A EQU ETR	AP+1	30C00140 30C00150	0	Ο.	0604 01 6D0007A9 0606 0 6124	STX L1 CKESW LDX 1 36		30C00821 30C00830
0028 ILO EQU 40		30000160	_	_	0607 0 6909	STX 1 BSW3	RESET SPACE DELAY	30 C 00 840
0029 IL1 EQU ILO		30 C0 0 1 70	0	9	0608 0 4001	BSI CNTRL	GO TO CONTROL RTN	30000850
002A IL2 EQU IL1 002B IL3 EQU IL2		30C00180 30C00190			0609 0 700B	MDX CN12		30 C 0 0 8 6 0 30 C 0 0 8 7 0
OCC IL4 EQU IL3		30 C0 0 2 0 0	Ο;	; O		* THIS ROUTINE CHECKS SE		30 00 0 80
0030 ILCRP EQU IL4		30C00210 30C002 <i>2</i> 0				* SEQUENCE IN WHICH TEST	ROUTINES ARE RUN.	30C008 90 30C009 00
	RP+2 AT+1	30C00220	0	0	060A 0 0000	CNTRL DC 0		30000910
0034 RQKB EQU RQT	Y+1	30000240	,		060B 0 C0D2	LD BSWO	LD CONTROL SWS	30000920
0035 SVKB EQU RQK 0036 ILIR EQU SVK		30C002 50 30C002 60	O.	0	060C 01 440407E7	BSI L STOP,E	CK FOR PROG STOP	30C00 930 30C00940
# #		30C002 70	O .		060E 01 7400050F	CN10 MDX L BSW1.0	SKIP IF NO RTN	3000950
0037 AEND EQU ILI		30000280	0	0	0610 C 700A	MDX CN14	SELFC TED	30C00960 30C00970
OO3E ALD EQU AEN		30C00290 30C00300	O	.	0611 C COCC 0612 O 100A	LD BSWO SLA 10	LD CONTROL SWS CK FOR LOOP ON RTN	30000980
GO41 ANINT EQU ALD	+3 NO INTRPT	30C00310	_	•	0613 01 4CA9060A	BSC I CNTRL, Z+	RETURN IF LOOP	30C00990
	NT+3 INTRPT T+7 NRDY	30C00320 30C00330	O .	O	0615 00 65000001	* CN12 LDX L1 1	RTN NO. SET HERE	30C01000 30C01010
	DY+1 RGY	30C00340	_	_	0617 01 74910616	CN13 MDX L CN12+1.1	ADV RTN NO	30001020
OPA UPB SWS EQU ARD		30 C0 0 3 50	O.	O	0619 01 40800629	BSC II RTTBL-1	GO TO RTN	30001030
0054 ASB EQU ASW 0058 ADSCT EQU ASB		30 C00 3 60 30 C00 3 70		f ·	061B 0 COC3	TCN14 LD BSW1	LD RNT SLCT SWS	30C01040 30C01050
	CT+2 SELCT	30000380	Ù.	· ()	061C 0 100D	SLA 13	STRIP OUT INVALID	30001060
0060 AWAS EOU ASC	T+6 WAS	30 C00 3 90 30 C00 4 00			061D 0 180D	SRA 13 STO PRDIA+1	SWI TCHE S	30C01070 30C01080
		30C00410	0	•	061E 0 DODA 061F 0 DOF6	STO CN12+1		30C01090
*		30 0004 20			0620 0 1810	SRA 16		30001100
▼ °PK1)	NTER DIAGNOSTIC	30 C0 0 4 30 30 C0 0 4 40	Ο,	; ()	0621 0 °D0BD 0622 0 70F2	STO BSW1 MDX CN12	RESET ROUTINE SWITCH	30C01110 30C01120
•		30 C0 0 4 5 0	İ	ĺ	0022 0 10.2	•		30 Cn 11 30
# 05DC 0 0C00 PRPST DC /0C	00 PID	30C00 460 30C00 470	O	0		* END OF TEST		30C01140 30C01150
05DC 0 0C00 PRPST DC /0C0 05DD 0 0000 PRROU DC 0	ROUTINE	30 C0 0 4 8 0	•		0623 0 COBA	PREND LD BSWO	LO CONTPOL SWS	30C01160
05DE 0 2000 BSW0 DC 0 '	PROGRAM CONTROL	30 00 04 90	0	^	0624 0 100B	SLA 11	CHECK FOR LOOP PROGRAM	30C01170
05DF 0 0000 BSW1 DC 0	ROUTINE SELECTION SCAN START CHARACTER	30C00500 30C00510	~ /.	0	0625 01 4C28U5F8 0627 00 44800015	BSC L PRDIA,+Z BSI I END		30C01180 30C01190
05E1 0 0012 BSW3 DC 18	SPACE AFTER PRINT DLY	30C00520	^	_	0629 1 05DC	DC PRPST		30C01200
05E2 1 C5E8 DC PRS 05E3 1 C5E8 DC PRD		30C00530 30C00540	O , :	0		* * ROUTINE ADDRESS TABLE		30C01210 30C01220
05E3 1 05F8 DC PRD 05E4 0 0000 PST32 DC 0	ENTRY SET IN MAINLINE	30C00550	_			* MODELINE NORMERS INDICE		3001220
05E5 0 0000 PSTIN DC 0	IN INTERRUPT	30000560	0	0	062A 1 07F3	RTTBL DC CE10	RTN1 EMIT SEQUENCE	30C01240
05E4 0 0000 PSTDE DC 0		30C00570 30C00580	_		0628 1 080F 062C 1 082E	DC CS10 DC SP10	RTN2 SCAN CHECK RTN3 SPACE	30C012 5 0 30C012 6 0
05E8 00 44800010 STRT BST I BEG	IN	30 C 0 0 5 9 0	· O	0	062D 1 0840	DC SC 10	RTN4 SKIP	30C01270
OSEA 1 OSDC DC PRP	ST PST TABLE	30C00600 30C00610			062E 1 0889	DC RR01	RTNS ROTATING PAT	30C01280
+ INITIALIZATION	ROUTINE	30000620	0	0	062F 1 08E3 0630 1 091E	DC AC 10 DC AO 10	RTN6 ALL CHARACTERS. RTN7 FAST PRINT	30C01290 30C01300
		30000630			0631 1 0623	DC PREND	END ROUTINE	30C01310
05EB 0 0001 PRSET DC 1 05EC 01 000006DC XIO L STP	PT STOP PRINTER	30C006 40 30C006 50	O	0		* * CONSTANTS AND STORAGE		30C01320 30C01330
05EE C1 650005F8 LDX L1 PRD	14	30C00660				*		30C01340
05F0 01 6D0005E4 STX L1 PST	32	30000670	0	0				30 CO 1 3 50
DATE 02JAN66 01MAY66 01JUL56		PROG ID 030C-1	o	0	DATE 02JAN66 EC NO. 415490	01MAY66 01JUL66		PROG ID 030C-1
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			PAGE 2						PAGE ZA
1132 PRINTER FUNCT	ION TEST			O	0	1132 PRINTER FUNCTS	ION TEST		
				0		•			
	* INTERRUPT ROUTINE		30001360		0	.0694 0 7101	MDX 1 1	DECREMENT WORD CNT	30C02010
0632 0 0000	PIRT DC G		30C01370 30C01380	0	0	0695 0 7007 0696 0 7201	MDX PI7 MDX 21	ADV TO NEXT WORD	30C020 20 30C020 3 0
0633 00 650005DC	LDX L1 1500	RESET INTERRUPT	30C01390	_		0697 0 7001	MDX *+1		30C020 40 30C020 50
0635 01 60000747 0637 01 000006E0	STX L1 ICT XIO L DSW32	WAIT COUNTER CHECK DSW	30C014 00 30C01410	O	O	0698 0 70E0 0699 0 61F0	MDX PI2+3 LDX 1 -16	RESET SHIFT CNT	30002060
0639 01 740007A9 0538 C 7012	MDX L CKESW.O MDX PIA		30C01411 · 30C01412			069A 0 1090 069B 00 D6000028	SLT 16 STO L2 40	SET NEXT WORD	30C020 7 0 30C020 8 0
063C 01 D40009E0	STO L ERM4	SAVE DSW	30C01420	O	O		•		30C02090 30C02100
063E 01 E40006D7 0640 01 F40006D8	AND L MSK1 EOR 1 MSK2	MASK BITS 7-15 CK FOR GOOD DSW	30C01430 30C01440		_	069D 0 C040 069E 00 EC000027	PI7 LD STSPA OR L 39	RESTORE SCAN COMP BIT	30C02110
0642 01 4C18064E 0644 01 C40009E0	SSC L PIA,+- PIE LD L ERM4	BR IF DSW OK	30C01450 30C01460	O	0	06A0 00 D4000027 06A2 0 69E9	STO L 39 STX 1 PI5+1	SAVE XR1	30C02120 30C02130
0646 01 E40006D7	AND L MSK1	MASK BITS 7-15	30C014 70	0	0	06A3 0 6AEA	STX 2 P16+1	SAVE XR2	30C021 40 30C021 50
0648 01 D40009E0 064A 01 6500U9A4	STO L ERM4 LDX L1 ERR12	STORE DSW IN MESS SET TO TYPE ERROR	30C01 480 30C014 9 0	U	O	06A4 01 740106DC 06A6 0 70CD	MDX L STPPT,1 MDX PI1+2		30 C0 2 1 60
064C 01 6D0007A9 064E 01 C40009E0	STX L1 CKESW PIA LD L ERM4		30C015 0 0 30C01510	0	O	06A7 0 61CF 06A8 0 6933	LDX 1-49 STX 1STPPT	PUT SPACE In Pattern	30C021 7 0 30C021 8 0
0650 01 4C280659	BSC L PINT,+Z	BR IF PRINT RES	30C01520			06A9 0 70DC	MDX PI4		30 CO 21 90 30 CO 22 00
0652 0 1001 0653 G1 4C2806AD	SLA 1 BSC L SKINT+Z	BR IF SKIP RES	30C01530 30C01540	O	. 0	06AA 01 44200748	PI8 BSI L FFE,Z	IDENTIFY 1ST EMIT CHAR	30C02210
0655 0 1001 0656 01 4C28U6 CF	SLA 1 BSC L SPINT,+Z	BR IF SPACE RES	30C015 50 30C015 60			06AC 0 70D5	MDX PI3		30C022 20 30C02 230
0658 0 700E	MDX PIS	GO STOP PRINTER	30C015 70	0,	• 0		* THIS IS THE SKIP INTE	ERRUPT ROUTINE	30C022 40 30C022 50
0659 01 0C0006E4	PINT XIO L RDEMT		30C01580 30C01590			06AD 01 0C0006E8	SKINT XIO L STPCA		30 C0 22 60
065B 01 740006DA 065D 0 704C	MDX L STPRT MDX PI8	CK FOR 1ST EMIT BR IF 1ST EMIT	30C01600 30C01610	•	0	06AF 0 1810 06B0 0 D021	SRA 16 Sto CCF		30C02270 30CG2280
065E 01 44000786	BSI L CKEMT	CK EMIT SEQUENCE	30C01620 30C01630	0	0	0681 01 6580087E 0683 01 C5000888	LDX II SCTM LD L1 SKPT+8	GET CHANNEL NUMBER AND PLACE IN XR1	30 C0 22 90 30 C0 23 00
0660 0 C074	LD IDLE	CHECK FOR PRINT	30C01640		. ".	0665 00 D4000001	STO L 1		30C02310 30C02311
0661 0 D074 0662 01 4C280676	STO IDLSW BSC L PI2++Z	SET IDLE SW BR IF PRINT	30C01650 30C01660	\cap	o '	0687 01 C40009E0 0689 0 E019	LD L ERM4 And Skm	LD DSW Mask out first 8 bits	30C02320
0664 01 74FF06D5 0666 0 7018	MDX L IDLE,-1 MDX PI3	DEC IDLE CNT BR IF IDLE	30C01670 30C01680			06BA 01 F50006C2 06BC 01 4C2006BF	EOR L1 SKCH BSC L SK10,Z	IF AC = 0, MATCH FOUND NO MATCH, RETURN	30C023 30 30C02 34 0
	•	OR II IOLL	30C01690	<u> </u>	O	06BE 0 6913 06BF 01 65000868	STX 1 CCF	SET MLSCF	30C02350 30C02360
0667 0 1810 0668 01 D40008DD	PIS SRA 16 STO L EMIT	SET EMIT TO ZERO	30C01695 30C01700		•	06C1 0 70B0	MDX PI1	SET RESULT	30 C02370
0668 0 0871 0668 01 65000708	XIO STPPT LDX L1 SP2	STOP PRINTER SET FOR SPACE RETURN	30C01710 30C01720	Q	0	06C2 0 0000	* Skch DC 0	INVALID CHANNEL	30C023 6 0 30C023 9 0
066D 01 740006E2	MDX L SENSE, 0		30C01 730	. 0	9	06C3 0 0080 06C4 0 0040	DC /0080 DC /0040	CHANNEL 1 CHANNEL 2	30C02400 30C02410
066F 0 7002	MDX PI1		30C01740 30C01750	, ,		0605 0 0020	DC /0020	CHANNEL 3	30C0242G
0670 01 65000700 0672 01 6D0005E5	LDX L1 PRTN PI1 STX L1 PSTIN	SET MLSCF	30C01760 30C01770)	9	06C6 0 0010 06C7 0 0008	DC /0010 DC /0008	CHANNEL 4 Channel 5	30C02430 30C02440
0674 01 40800632	BSC I PIRT		30C017 80 30C017 90			06C8 0 0004 06C9 0 0000	DC /0004 DC 0	CHANNEL 6 Invalid 7	30 C02450 30C0 2460
0676 01 74FF06D4	PI2 MDX L SCNCT,-1	ADV SCAN CHT	30C01800	Ü	9	06CA 0 0000	DC O	CHANNELS 8	30 C0 24 70 30 C0 24 80
0678 0 700D 0679 01 44000723	MUX PI4 BSI L CLEAR	GO SHIFT BUFFER SET BUFFER TO ZERO	30C01810 30C01820	_		06CB 0 0002 06CC 0 0000	DC /0002 DC 0	CHANNEL 9 INVALID	30C02490
0678 00 65008200 0670 01 6D0006D8	LDX L1 /8200 STX L1 MSK2	SET MASK FOR NORMAL PRINT DSW	30C01830 30C01840	()	·)	06CD 0 0000 06CE 0 0001	DC 0 DC /0001	CHANNELS Channel 12	30C02500 30C02510
067F 01 C40005E1	LD L BSW3		30C01850 30C01860	0	9		* * THIS IS THE SPACE INT	TERRUPT ROUTINE	30C02520 30C02530
0681 0 0053	\$TO IDLE	SET IDLE COUNT	30C01870				*		30C02540
0682 01 740006E2 0684 0 70EF	PI3 MDX L SENSE,0 MDX PI1+2	SKIP IF RTRN TO PRINT	30C01880 30C01890	O)	06CF 01 6500071B 06D1 0 70A0	SPINT LDX L1 SPRTN MDX PI1	RETURN TO SPACE RTN	30C02550 30C02560
0685 0 70EA	MDX PI1-2		30C01900 30C01910			•	* * CONSTANTS AND STORAGE	•	30C025 7 0 30C025 8 0
0686 00 C4000027	P14 LD L 39	SAVE SCAN COMP	30C01920	. O	J.	2422 2 2002	•		30C02590 30C02600
0668 0 E057 0689 0 D054	AND DSW32 Sto Stspa		30C01930 30C01940			06D2 0 0000 06D3 0 00FF	CCF DC 0 SKM DC /OOFF		30C02610
068A 0 10A0 068B 00 6500FFF0	SLT 32 PI5 LDX L1 -16		30C01950 30C01960	0		06D4 0 0000 06D5 0 0000	SCNCT DC 0 IDLE DC 0	SCAN COUNT IDLE COUNT	30C02620 30C02630
068D 00 6600FFF8	PI6 LDX L2 -8		30C019 70	0	0	06D5 0 0000 06D7 0 FE00	IDLSW DC 0 MSK1 DC /FE00	IDLE SW	30C02640 30C02650
068F 00 C6000028 0691 0 18C1	LD L2 40 RTE 1	LD WORD TO SHIFT SHIFT BIT	30C01980 30C01990			06D8 0 2000	MSK2 DC /2000		30CU2660
0692 00 D6000028	STO L2 40		30C02000	O	0		•		30 C0 26 70
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DATE 02JAN66 EC NO. 415490	01MAY66 01JUL66 4154 90B 4154 90C		PROG ID 030C-1 PAGE 2	0	0	EC NO. 415490	415490B 415490C		PAGE 2A
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IBM MAINTENANCE DI	AGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART ND. 2191220 PAGE 3	О	o	IBM MAINTENANCE DIA	AGNOSTIC PROGRAM FOR THE	1130 SYSTEM	PART NO. 2191220 PAGE 3A
1132 PRINTER FUNCT	ION TEST	PAGE	o	o	1132 PRINTER FUNCT	ION TEST		
			0	0				
	* IOCC TABLE AND EVEN ADDRESS CONSTANTS	30C026 80 30C026 90	_			* SETS BIT 15, LOC 39.		30 C0 3 3 60 30 C0 3 3 70
06DA 0000 06DA 0 0000	BSS E STPRT DC /0000 START	30C02 700 30C02 710	0	O	0723 0 0000 0724 0 61F8	CLEAR DC 0 LDX 1 -8	PRINT AREA	30C03380 30C03390
06DB 0 3480 06DC 0 0000	DC /3480 PRINTER STPPT DC /0000 STOP	30C02720 30C02730	0	0	0725 0 10A0 0726 00 DD00G028	SLT 32 CL10 STD L1 40 MDX 1 2		30C03400 30C03410 30C03420
06DD 0 3440 06DE 0 0000 0cDF 0 3401	DC /3440 PRINTER STSPA DC /0000 START DC /3401 SPACE	30C02740 30C02750 30C02760	0	0	0728 0 7102 0729 0 70FC 072A 0 6101	MDX 1 2 MDX CL10 LDX 1 1	SET 815 L 39 TO ONE	30 C0 34 30 30 C0 34 40
06DF 0 3401 06E0 0 0001 06E1 0 3701	DSW32 DC /0001 CHECK DC /3701 DSW	30C027 70 30C027 80			0728 00 6D000027 072D 01 4C800723	STX L1 39 BSC I CLEAR		30 C0 34 50 30 C0 34 60
06E2 0 0000 06E3 0 3700	SENSE DC /0000 SENSE WITHOUT DC /3700 RESET	30C02 790 30C02 800	0	Ö		* * SUBROUTINE TO SET PRI	NT AREA TO ONES	30C03470 30C03480
06E4 1 0800 06E5 0 3200	RDEMT DC EMIT READ CHARACTER DC /3200 SCANNED	30C02810 30C02820	O	∂	072F 0 0000 0730 0 63F8	* A1 DC 0 LDX 3 -8		30C03490 30C03500 30C03510
06E6 0 000C 06E7 0 3494 06E8 0 0000	STCAR DC	30C028 30 30C028 40 30C02 850	Ō	\cap	0731 0 C888 0732 00 DF000028	LDD ONES Alio STD L3 40	SET PRINT AREA TO ALL ONES	30C03520 30C03530
06E9 0 3402 06EA 0 FFFF	DC /3402 CARRIAGE ONES DC /FFFF	30C02860 30C02870		<u>.</u>	0734 0 7302 0735 0 70FC	MDX 3 2 MDX Allo		30C03540 30C03550
OSEB O FFFF	DC /FFFF	30 C0 28 80 30 C0 28 90	Ú	()	0736 01 4C80072F	BSC I A1	LEAVE	30C03560 30C03570 30C03580
0455 0 0000	THIS IS THE PRINT ROUTINE PRINT DC O	30C029 00 30C029 10 30C029 2 0	Ċ	0	0738 0 0000	* THIS SUBROUTINE WAITS * ICTR DC 0	FUR INTERRUPT	30C03590 30C03600
06EC 0 0000 06ED 0 69E6 06EE 0 69F3	STX 1 SCNCT STD SCAN CNT STX 1 SENSE SET PRINT RTRN SW	30C02930 30C02940	\circ	\circ	0739 00 650005DC 0738 0 6908	LDX L1 1500 STX 1 ICT	SET COUNT	30C03610 30C03620
06EF 0 COFC 06F0 0 D016	LD PRINT STO SPACE SET RETURN FROM SPACE	30C029 50 30C029 60	0)	073C 01 65000742 073E 01 600005E6	ICTR1 LDX L1 ICTR2 STX L1 PSTDE		30 C0 36 30 30 C0 36 40 30 C0 36 50
06F1 0 61FF 06F2 0 69E2	LDX 1 -1 STX 1 IDLE SET FUR PRINT SLA 16	30C02970 30C02980 30C02990			0740 00 4C80G911 0742 01 74FF0747 0744 0 70F7	BSC I START ICTR2 MDX L ICT,-1 MDX ICTR1		30C03660 30C03670
06F3 0 1010 06F4 01 D40005E5 06F6 0 08EB	SLA 16 STO L PSTIN RESET HLSCF XIU SENSE	30C03000 30C03010	Ü		0745 01 4C800738 0747 0 0000	BSC I ICTR ICT DC O		30 C0 36 80 30 C0 36 90
06F7 0 1006 06F8 01 4C2806FC	SLA 6 CK IF BUSY BSC L PRN1,+Z BR IF BUSY	30 C0 30 20 30 C0 30 30	O)		* THIS SUBROUTINE FINDS	THE FIRST CHARACTER	30C03700 30C03710
06FA 0 68DF 06FB 0 08DE	STX STPRT SET 1ST SCAN SW XIO STPRT START THE PRINTER	30C03040 30C03050 30C03060	\mathbf{c}	0	0748 0 0000	* EMITTED IN THE TABLE * FFE DC 0		30 C0 37 20 30 C0 37 30 30 C0 37 40
06FC 01 44000738 06FE 01 4400096D	PRN1 BSI L ICTR WAIT FOR INTERRUPT BSI L ERR4 NO INTERRUPT	30C03070 30C03080			0749 01 C40008DD 074B 0 E861	LD L EMIT OR OREM	CK FOR MISSING EMIT BITS	30C03750 30C03760
0700 01 C40007A9	PRTN LD L CKESW	30C03090 30C03100	Ŋ	·)	074C 0 D060 074D 01 C40008DD	STO OREM LD L EMIT	FF00 IF OK	30C03770 30C03780
0702 0 D001 0703 00 44200000	STO #+1 BSI L #-*,Z BR IF EMIT ERR	30 CO 31 10 30 CO 31 20 30 CO 31 30	Ú)	074F 0 E05C 0750 0 D05B 0751 0 F05B	AND ANDEM STO ANDEM EOR OREM	CK FOR SHORTED EMIT BITS OCOO IF CK CK FOR EMIT BITS OK	30C03790 30C03800 30C03810
0705 01 4C8006EC	BSC I PRINT SPACE SUBROUTINE	30 C0 31 40 30 C0 31 50	O		0752 0 F057 0753 01 4C200771	EOR KFFOO BSC L ST20,Z	CONT IF ALL EMIT BITS OK	30 C 0 3 8 2 0 30 C 0 3 8 3 0
0707 0 0000	* SPACE DC 0	30C031 60 30C031 70		0	0755 0 1010 0756 01 D40006DA	SLA 16 STO L STPRT	RESET 1ST SCAN SW	30C03840 30C03850
0708 01 C49007A9	SP2 LD L CKESW CHECK IF SEQUENCE ERROR	30C03180 30C03190 30C03200	0	· ,	0758 0 63D0 0759 01 C700096C 0758 01 940008DD	LDX 3-48 STO5 LD L3 CHAR+48 S L EMIT	FIND 1ST CHAR EMITTED IN SEQUENCE TABLE	30C03860 30C03870 30C03880
070A 01 4420097C 070C 01 C40005DE 070E 0 100F	BSI L ERR7,Z BR IF EMIT ERR LD L BSWO LD CONTROL SWS SLA 15 CK FOR PROG HALT	30C03210 30C03220	Ú)	075D 01 4C18076A 075F 0 7301	BSC L ST10,+-	FOUND IF BR GO TO NEXT TABLE ENTRY	30C03890 30C03900
070F 01 442807E7 0711 00 65002000	851 L STOP,+Z LDX L1 /2000	30C032 30 30C032 40	0	$\hat{\mathbf{O}}$	0760 0 70F8 0761 01 6700098D	MDX STO5 LDX L3 ERR9		30C03910 30C039 <i>2</i> 0
0713 31 6D0006D8 0715 01 0C0006DE	STX L1 MSK2 SET MASK FOR SPACE XIO L STSPA START SPACE	30 C0 32 50 30 C0 32 60 30 C0 32 70	Q	Δ.	0763 0 6845 0764 01 C40008DD 0766 01 D40009E1	STX 3 CKESW LD L EMIT STO L ERM5	STO EMIT IN ERR MESS	30C03930 30C03940 30C03950
0717 01 44000738 0719 01 44000977	BSI L ICTR WAIT FOR INTERRUPT BSI L ERR6	30C03270 30C03280 30C03290			0768 01 4C800748 0768 0 7301	BSC I FFE ST10 MDX 3 1	DECREMENT XR FOR NEXT CHAR	30C03960 30C03970
071B 01 440007B0 071D 01 C40005DF	SPRTN BSI L FORMS CK DSW LD L BSW1 CHECK FOR NEW	30 C0 3 3 00 30 C0 3 3 10	Ů.		076B 0 7001 076C 0 63D0	MDX ST15 LDX 3 -48	AND SAVE IF XR3 = 0 , RESET	30 C0 39 80 30 C0 39 90
071F 01 4C30061B 0721 01 4C800707	BSC L CN14,Z- ROUTINE NUMBER BSC I SPACE RETURN	30C03320 30C03330 30C03340	O.		076D 01 6F0008E0 076F 01 4C800748	ST15 STX L3 CHARC BSC I FFE		30C04000 30C04010 30C04020
	* THIS SUBROUTINE CLEARS 32-39 AND	30 CO 33 50	0	0	0771 01 74FF07AB	ST20 MDX L EMTCT+-1	CNT 100 EMITS	30C04030
DATE 02JAN66 EC NO. 415490	01MAY66 01JUL66 4154508 415490C	PROG ID 030C-1 PAGE 3	0	0	DATE 02JAN66 EC NO. 415490	01MAY66 01JUL66 4154508 415490C		PROG ID 030C-1 PAGE 3A

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				20 0	o	IRM MAINTENANCE D	AGNOSTIC PROGRAM FOR THE	E 1120 CYCTEN	PART NO. 2191220
IBM MAINTENANCE DI	AGNOSTIC PROGRAM FOR THE	E 1130 SYSTEM	PART NO. 219122 PAGE	20 4		IDH HAIRICHANCE D	MONOSTIC PROGRAM FOR THE	: 1130 3131EH	PAGE 4A
1132 PRINTER FUNCT	ION TEST			O	0	1132 PRINTER FUNC	TION TEST		
				· · O	0				
0773 0 7010	MDX ST25	THEN SKIP	30004040	· ·	0	07CB 01 650007C4	ULOG2 LDX L1 ULOG1	BUSY	30C04600 30C04610
0774 01 670009AE 0776 0 6B32 0777 01 000006DC 0779 0 C832	LDX L3 ERR13 STX 3 CKESW XIO L STPPT LDD ANDEM	SET ER SW FOR ER 13 STOP THE PRINTER LD ERROR CODE	30C04050 30C04060 30C04061 30C04062	0	0	07CD 01 6D0005E4 07CF 00 4C800011 07D1 0 FE00	ULOG3 STX L1 PST32 BSC I START FOMSK DC /FE00	SET MLCSF RETURN TO MONITOR	30C04620 30C04630 30C04640
077A 01 DC0009E0 077C 0 C831	STD L ERM4 LDD ANDOR	SET IN MESSAGE REINITIALIZE EMIT	30C04063 30C04064	0	O	07D2 0 0001 07D3 0 0000	STM DC 1 DC 0	WORD COUNT	30C046 50 30C04660
077D 0 D82E 077E 0 6164	STD ANDEM	CHECK WORD	30C04065 30C04066	0	0	07D4 0 0001 07D5 0 004B	DC 1 DC ANRDY	MESSAGE ID	30C04670 30C046 8 0
077F 0 692B 0780 01 65000700	STX 1 EMTCT LDX L1 PRTN	RESET EMIT CK CNT SET TO RETURN TO	30C04067 30C04070			07D6 0 0000 07D7 0 0000	DC 0 STM1 DC 0	DSW	30 C046 90 30 C04 7 00
0782 01 600005E5 0784 01 4C800632	STX LI PSTIN ST25 BSC I PIRT	PRINT ROUTINE	30C04080 30C04090	0	O	V V	* * THIS ROUTINE DELAYS		30C04710 30C04720
0104 01 40000032	•	VE THE CHARLETER CHITTER	30C04100	0	o	07D8 0 0000	* DC O		30C04 730 30C04 740
		KS THE CHAPACTER EMITTED ARACTERS IN THE PROPER SEQ	30C04110 30C04120 30C04130	\ <u>\</u>	`.)	07D9 0 1810 07DA 0 D00B	SRA 16 STD DLYCT		30C04750 30C04760
0786 0 0000 0787 01 C40007A9	CKEMT DC O		30C04140 30C04150	0	Ö.	07DB 01 740397E6 07DD 0 7002	CLY1 MDX L DLYCT, 3 MDX *+2		30C04770 30C04780
0789 01 4CA00786	BSC I CKEMT. Z	RETURN IF ERROR RESET XR3 AND CHECK IF	30C04160	0	0	07DE 01 4C80C7D8 07E0 01 650007DB	BSC I DLY LDX L1 DLY1		30C04 790 30C04800
078B 01 678C08E0 072D 01 C700096C	LDX I3 CHARC LD L3 CHAR+48	CHAR EMITTED	30C04170 30C04180	•./		07E2 01 6D0005E6 07E4 00 4C800011	STX L1 PSTDE BSC I START		30 C 0 4 B 1 0 30 C 0 4 B 2 0
078F 01 940008DD 0791 01 4C18C7A2	S L EMIT BSC L CKEMI, +-	IS IN THE PROPER SEQUENCE YES, IF BRANCH	30C04190 30C04200	Ċ	0	07E6 0 0000	DLYCT DC 0	DELAY COUNTER	30C04830 30C04840
0793 G1 C40008DD 0795 G1 D40009E1 0797 G1 678008E0	LD L EMIT STO L ERM5 LDX I3 CHARC	STO ENIT IN ERR MESS	30 C0 42 10 30 C0 42 20 30 C0 42 30	. <u>O</u>	0		* THE PROGRAM WILL LOOP * IF SW 15 FUNC CO IS		30C04850 30C04860 30C04870
0799 01 C700096C 079B 01 D40009E2	LD L3 CHAR+48 STO L ERM6	STO EMIT S/B	30 C0 4 2 4 0 30 C0 4 2 5 0		•	07E7 0 0000	STOP DC 0		30 C048 80
079D 01 6700097C 079F 0 6809	LDX L3 ERR7 STX 3 CKESW	SET ERROR SW	30 C0 42 60 30 C0 42 70	, O	0	07E8 01 C40005DE 07EA 0 100F	LD L BSWO SLA 15	LD CONTROL SWS CK FOR PROG HALT	30 C04890 30 C04900
07A0 C1 4C800786 07A2 0 7301	BSC I CKEMT CKEM1 MDX 3 1		30 C0 4 2 80 30 C0 4 2 90	$ \mathcal{O} $	O	07EB 01 4C9007E7	BSC I STOP,-	BR IF HALT OFF	30C04910 30C04920
07A3 0 7001 07A4 0 63D0	MDX R1153 LDX 3 -48	AND SAVE RESET XR3, IF = 0	30C04300 - 30C04310			07ED 01 650007E8 07EF 01 600005E4	LDX L1 STOP+1 STX L1 PST32	IF ON SET MLSCF FOR RETURN	30C04930 30C04940
07A5 01 6F0008E0 07A7 01 4C800786	R1153 STX L3 CHARC BSC I CKEMT	SAVE XR3	30 C043 20 30 C043 30	O .	O	07F1 00 4C800011	BSC I START		30C04950 30C04960
0749.0 0000 0744.0 FF00	CKESW DC 0 KFF00 DC /FF00	ERROR SWITCH	30C04340 30C04350	0	0		* TEST ROU'	TINE 1	30C04970 30C04980
07AB 0 0000 07AC 0000	EMTCT DC 0		30C04360 30C04361				* CHECK EMIT SEQUENCE /	AND NORMAL PRINT DSW	30C04990 30C050 0 0
07AC 0 0000 07AD 0 0000	ANDEM DC 0		30C04362 30C04363	Ú	O	07F3 0 6101 07F4 01 6D0005DD	CE10 LDX 1 1 STX L1 PRROU	STORE RTN NO	30C05010 30C05020
OTAE O BFOO	ANDOR DC /BF00	EMIT CK CONSTANT	30 C0 4 3 6 4	0	0	07F6 01 6C0069CD 07F8 01 44000723	STX L UERR9 BSI L CLEAR	SET LOOP ADDRS SET BUFFER TO ZERO	30C05030 30C05040
07AF 0 0000	DC /0000	40 FUE DOM COD	30 C0 4 3 6 5 30 C0 4 3 7 0	•	•	07FA 01 440007B0	BSI L FORMS	CK FOR READY	30C05050 30C05060
	* THIS SUBROUTINE CHECK * READY CONDITIONS	(2 THE D2M FOR	30C04380 30C04390	Õ	0	07FC 0 6164	CE11 LDX 1 100 STX L1 LPCNT	SET LOOP COUNT	30C05070 30C05080
0780 0 0000	FORMS DC 0		30C04400 30C04410	<u>, </u>	0	07FD 01 6D0008DF	* CE12 LDX L1 /8200	JET EGGF COUNT	30C05080 30C05090 30C05100
07B1 0 1810 07B2 01 D40005E6	SRA 16 Sto L PSTDE		30 C0 44 20 30 C0 44 30		()	07FF 00 65008200 0801 01 600006D8	STX L1 MSK2	SET MASK FOR PRINT	30C05110
0784 01 0C0006E2 0786 0 E01A	XIO L SENSE And Fomsk	DSW TO AC CCK BITS 0-7	30C04440 30C04450	Ú	\mathbf{O}^{-}	0803 00 65000000 0805 01 440006EC	LDX L1 O BSI L PRINT	SET SCAN CNT	30C05120 30C05130
0787 0 D01F 0788 01 4C980780	STO STM1 BSC I FORMS,+-	READY IF BRANCH	30C04460 30C04470		_	0807 01 74FF08DF 0809 0 70F5	MDX L LPCNT,-1 MDX CE12	ADV LOOP CNT	30C05140 30C05150
078A 0 1005 07E3 01 4C2807C4	SLA 5 BSC L ULOG1,Z+		30 C 0 4 4 8 0 30 C 0 4 4 9 0	<u>O</u>	9	080A 01 0C0006DC 080C 01 4400060A	XIO L STPPT BSI L CNTRL	STOP PRINTER GO TO CONTROL RTN	30C05160 30C051 70
07BD 0 C019 07BE 01 D40009E0	LD STM1 STO L ERM4	- -	30C04500 30C04510	0	0	080E 0 70ED	MDX CE11		30C05180 30C05190
07C0 01 4400099D	BSI L ERR11 BSC I FORMS		30 C0 4 5 20 30 C0 4 5 30				* TEST ROU"	TINE 2	30C05200 30C05210
07C2 01 4C8007B0 07C4 00 44800013	ULOG1 BSI I LOG DC STM	TYPE MESSAGE	30C04540 30C04550	0	\cap		+ CHECK PRINT SCAN CHEC	CK INDICATOR	30 C0 52 20 30 C0 52 30
07CF 1 07D2 07C7 1 07CB	DC ULOG2	BUSY	30C04560	0	0	080F 0 6102 0810 01 6D0005DD	CS10 LDX 1 2 STX L1 PRROU	STORE RTN NO	30C05240 30C05250
07C8 0 0000 07C9 0 400E	DC 0 BSI DLY HDX FORMS+1	HOLD SW GO DELAY TRY AGAIN	30C04570 30C04580 30C04590			0812 01 6C0 009CD 0814 01 440 00723	STX L UERR9 BSI L CLEAR	SET LOOP ADDRS SET BUFFER TO ZERO	30C05260 30C05270
07CA 0 70E6	HUA FURM 341	IN AURIN	JU 604970	0.	0	3014 01 44000123	See a value		
DATE 02JAN66	01MAY66 01JUL66 415450B 415490C		PROG ID 030C- PAGE	5 1 0	0	DATE 02JAN66 EC NO. 415490	01MAY66 01JUL66 415490B 415490C		PROG ID 030C-1 PAGE 4A

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IBM MAINTENANCE DIA	GNOSTIC PROGRAM FOR THE	1130 SYSTEM	PART NO. Page	2191220 5	0	o	IBM MAINTENANCE DIA	AGNOSTIC PROGRAM FOR T	HE 1130 SYSTEM	PART NO. 2191220 PAGE 5A
1132 PKINTER FUNCTI	ON TEST				0	0	1132 PRINTER FUNCT	ION TEST		
				· ·	O	0		•		
0816 01 44000780	BSI L FORMS	CK FOR READY	30C05280 30C05290				0864 01 D40009E1 0866 01 44000994	STO L ERM5 BSI L ERR10	SPECIFIED TYPE ERROR MESSAGE	30C05960 30C05970
0818 G 6164 0819 G1 6D0008DF	CS11 LDX 1 100 STX L1 LPCNT	SET LOOP COUNT	30 C0 53 00 30 C0 53 10		0	O	0868 01 44000738	* SC30 BSI L ICTR	IDLE UNTIL CARR HAS STOPPED	30C059 80 30C059 90
0818 0 1810	* CS12 SRA 16		30 C 0 5 3 2 0 30 C 0 5 3 3 0		0	o	086A 01 C40006D2 086C 01 4C200875	LD L CCF BSC L SC31,Z		30C06000 30C06010
081C 00 D4000027 081E 00 65008AG0	STO L 39 LOX L1 /8A00	SET MASK TO	30C05340 30C05350		0	0	086E 01 6680087F 0870 0 7201	LDX I2 SCTM1 MDX 2 1		30C06020 30C06030 30C06040
0820 01 600006DB 0822 00 65000000	STX L1 MSK2 LDX L1 O BSI L PRINT	CK FOR SCAN CHECK SET SCAN CNT	30 C0 53 60 30 C0 53 70 30 C0 53 80		J	()	0871 0 7001 0872 0 70ED 0873 0 6A0B	MDX SC 305 MDX SC 18 SC 305 STX 2 SC TM1		30C060 50 30C060 50 30C060 60
0924 01 440006EC 0826 01 74FF09DF 0828 0 70F2	MDX L LPCNT,-1 MDX CS12	ADV LOOP CNT	30C05390 30C05400		Ò	O	0874 0 70D5 0875 0 62F8	MDX SC17 SC31 LDX 2 -8		30C06070 30C06080
0829 01 0C0006DC 0828 01 4400060A	XIO L STPPT SSI L CHTRL	STOP PRINTER GO TO CONTROL RTN	30C05410 30C05420		Q	· ·	0876 0 6A08 0877 01 6580087E	STX 2 SCTM1 LDX I1 SCTM		30CC6090 30CC6100
082D 0 70EA	MDX CS11	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	30 CO 54 30 30 CO 54 40				0879 0 7101 0874 0 70CE	MDX 1 1 MDX SC16	INTERRUPT OCCURD FOR CHANNEL, GO TO NEXT	30C06110 30C06120
	* TEST ROUT	INE 3	30C05450 30C05460		0	O	0878 01 4400060A	* BSI L CNTRL	NONE LEFT. END OF ROUTING	30 CC 61 30 30 CC 61 40
	•		30 C 0 5 4 7 0 30 C 0 5 4 8 0		0	O	0870 0 7009	MDX SC15	•	30C06150 30C06160
	* THIS ROUTINE CHECKS FI * AND CHECKS THE DSW	IN SPACE KESPUNSES	30C05490 30C05500 30C05510		Ø	0	087E 0 0000	* CONSTANTS AND STORA * SCTM DC 0	TEMPORARY STORAGE FOR XR	30 C 0 6 1 7 0 30 C 0 6 1 8 0 30 C 0 6 1 9 0
082E 0 6103 082F 01 60000500	SP10 LOX 1 3 STX L1 PPROU	STORE RTN NO	30C05520 30C05530	•	_		087F 0 0000 0880 0 0001	SCTM1 DC 0 SKPT DC 1	VALID	30C06200 30C06210
0831 01 6C0009CD 0833 01 440007B0	STX L UERR9 BSI L FCRMS	SET LOOP ADDRS CK FOR READY	30C05540 30C05550		•)	0	0881 0 0002 0882 0 0003	DC 2 DC 3	CHANNELS	30C06220 30C06230
0835 0 61CE	* SP15 LOX 1 -50		30 C0 55 60 30 C0 55 70		. 0)	0883 0 0004 0884 0 0005	DC 4 DC 5		30C06240 30C06250
0836 0 6903 0837 01 44000707	SP16 STX 1 SP30+1 BSI L SPACE		30 C 0 5 5 8 0 30 C 0 5 5 9 0		0	0	0885 0 0006 0886 0 0009	DC 6 DC 9		30C062 60 30C062 70
0839 00 65000000	SP30 LDX L1 0		30 C0 56 00 30 C0 56 10 30 C0 56 20		• • • • • • • • • • • • • • • • • • • •	0	0887 0 000C 0888 1 06AD	DC 12 SCA2 DC SKINT		30C062 80 30C062 90 30C063 00
0838 0 7101 083C 0 70F9 083D 01 4400060A	MDX 1 1 MDX SP16 BS1 L CNTRL	GO TO CONTROL RTN	30C05630 30C05640		0	Ò		* TEST RO	UTINE 5	30CG6310 30CC6320
083F 0 70F5	MOX SP15		30C05650 30C05660		0)		* THIS IS THE PART OF		30 C 0 6 3 3 0 30 C 0 6 3 4 0
	* TEST ROUT	INE 4	30 C 0 5 6 7 0 30 C 0 5 6 8 0		0			* PRINTS LINES OF ROT	ATION PATTERNS	30C06350 30C06360
	* + THIS POUTINE CHECKS S	K1P CONTROL	30 C0 56 90 30 C0 57 00		O		0889 0C 65000005 088B 01 6D0005DD	RRO1 LDX L1 5 STX L1 PRROU	STORE RTN NO	30C06370 30C06380
0840 0 6104 0841 01 60000500	SC10 LDX 1 4 STX L1 PRROU	STORE RTN NO	30C05710 30C05720 30C05730		0	0	088D 01 6C0009CD 088F 01 440007B0 0891 01 44000723	STX L UERR9 BSI L FORMS BSI L CLEAR	SET LOOP ADDRS CK FOR READY	30C063 90 30C064 00 30C064 10
0843 01 6C0009CD 0845 01 44000780	STX L UERR9 BSI L FORMS	SET LOOP ADDRS CK FOR READY	30 C0 57 40 30 C0 57 50	•	0	\mathbf{O}	0893 01 44000707 0895 01 44000707	BSI L SPACE BSI L SPACE		30 C0 64 20 30 C0 64 30
0847 0 61F8	* SC15 LDX 1 -8		30C05760 30C05770		0		0897 0 61CF 0898 01 6D0008AE	LDX 1 -49 STX L1 R104+1	SET EMIT CHAR CNT	30 C0 64 40 30 C0 64 50
0848 0 6936 0849 0 6934	STX 1 SCTM1 SC16 STX 1 SCTM		30C057 80 30C05 790 30C058 00		·	0	089A 0 6132	R101 LDX 1 50	SET LINE COUNT	30 C0 64 60 30 CC 64 70
084A 01 C40005DE 084C 0 100F	SC17 LD L BSWO SLA 15	LD CONTROL SWS CK FOR PROG HALT	30C05810 30C05820		0	0	089B 0 6942 089C 0 6132	* R102 LDX 1 50	SET EMIT LOOP CNT	30 C 0 6 4 8 0 30 C 0 6 4 9 0 30 C 0 6 5 0 0
084D 01 442807E7 084F 01 C40005DF	BSI L STOP,+Z LD L BSW1	CHECK FOR NEW	30C05830 30C05840		0	\circ	089D 0 6941 089E 01 C40005E0	STX 1 LPCNT LD L BSW2	CHECK FOR LOOP ON	30 C 0 6 5 1 0 30 C 0 6 5 2 0
0851 01 4C30061B	BSC L CN14,Z-	ROUTINE NUMBER	30C05850 30C05860		0		08A0 0 100A 08A1 0 180A	SLA 10 SRA 10	CLEAR INVALID BITS	30C06530 30C06540
0853 00 65005000 0855 01 6D0006D8	LDX L1 /5000 STX L1 MSK2	SET MASK TO CK SKIP DSW	30C058 70 30C058 80	.	. 0	O 2	08A2 01 4C0808A6 08A4 0 903D	BSC L R103,+ S N050	START CHARACTER	30C06550 30C06560
0857 01 0C0006E6 0859 01 44000738	XIO L STCAR BSI L ICTR	START CARRIAGE IDLE FOR INTERRUPT ERROR. CHECK IF NO INT	30C05890 30C05900 30C05910	26 2	0		08A5 0 0008	STO R104+1	SET START SCAN EMIT	30C06570 30C06580
085B 01 0C0006F8 085D 01 44000972 085F) 7008	XIO L STPCA BSI L ERR5 MDX SC30	TYPE MESSAGE	30 C0 59 20 30 C0 59 30		0	10	08A6 00 65008200 08A8 01 6D00G6D8 08AA 0 6100	R103 LDX L1 /8200 STX L1 MSK2 LDX 1 0	SET MASK FOR PRINT SET SCAN COUNT	30 CC 55 90 30 CO 66 00 30 CO 66 10
0860 01 6580087E 0862 01 C5000888	SC18 LDX I1 SCTM LD L1 SKPT+8	DID NOT OCCUR FOR CHANNEL	30C05940 30C05950			• · · · · · · · · · · · · · · · · · · ·	08AB 01 440006EC	BSI L PRINT	GO PRINT	30C06620 30C06630
3.000					0	i O				
DATE 02JAN66 EC NO. 415490	01MAY66 01JUL66 4154508 415490C		PROG ID PAGE	030C-1 5	ð	0	DATE 02JAN66 EC NO. 415490	01MAY66 01JUL66 4154908 415490C		PROG ID 030C-1 PAGE 5A

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IBM MAINTENANCE DIA	GNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. 2191220 PAGE 6	0	0	IBM MAINTENANCE DIAGNOST	IC PROGRAM FOR THE	1130 SYSTEM	PART NO. 2191220 PAGE 6A
1122 001NTCD 5HNCT1	ON TEST		0	0	1132 PRINTER FUNCTION TE	CT.		
1132 PRINTER FUNCTI	UN TEST	• •			1132 FAIRLY TONCHON TE			
			0	0				
08AD 00 67000000	R104 LDX L3 0 COMPARE START SCAN	30 C0 66 40			08F4 01 C40005E0 08F6 0 100A	LD L BSW2 SLA 10	CHECK FOR LOOP ON	30C07320 30C07330
08AF 01 C700096D 08B1 0 902B	LD L3 CHAR+49 CHAR WITH LAST S EMIT EMIT CHAR	30 C 0 6 6 5 0 30 C 0 6 6 6 0	0	0	08F7 0 180A	SRA 10	CLEAR INVALID BITS	30C07340
0882 01 4C18099C 0884 01 74010606	BSC L R107,+- LOOP IF NOT EQUAL HDX L IDLSW,1 SKIP IF SCAN CNT -1	30 C0 66 70 30 C0 66 80			08F8 01 4C0808FC 08FA 0 90E6	BSC L AC20,+	START CHARACTER	30C07350 30C07360
08B6 C 70E5	MDX R102	30C06690	0	0	08F8 0 D008	STO AC 30+1	SET START SCAN EMIT	30 C0 7 3 7 0 30 C
0887 01 74FF08DF	MOX L LPCNT,-1 IF AFTER 50 CONSECUTIVE	30 C0 67 00 30 C0 67 10	•		08FC 00 65008200 AC20			30 C07390
C8B9 0 70EC 08BA 0 1810	MDX R103 EMITS A MATCH IS NOT SRA 16 FOUND, LEAVE SPACE	30C06720 30C06730	Ō	· O ,	08FE 01 6D0006D9 0900 0 6100	STX L1 MSK2 LDX 1 0	SET MASK FOR PRINT	30C07400 30C07410
0856 0 7001	MOX R107+1 THEN CONTINUE	30C06740	0	0	0901 01 4400C6EC	BSI L PRINT		30C074 <i>2</i> 0 30C07430
08BC 0 CO1F	PIO7 LD SET SET BUFFER WITH FIRST BIT	30C06 750 30C06 760	O	· ·	0903 00 65000000 AC30			30C07440
08BD 0 61F0 08BE U 62F8	LDX 1 -16 SET SHIFT REGISTER LDX 2 -8 SET STORAGE REGISTER	30C06 770 30C06 780	0	0	0905 0 C007 0906 01 9500096C	LD EMIT S L1 CHAR+48	CHECK IF CHARACTER IS TO BE PRINTED	30C07450 30C07460
08BF 0 7301	MOX 3 1	30C06 790			0908 01 4C180911	BSC L AC35,+-	YES IF BRANCH	30C07470
08C0 0 7075 08C1 0 63CE	HDX R1041 LDX 3 -50	30 C0 6 8 0 0 30 C0 6 8 10	0	O 2	990A 01 740104D6	PDX L IDLSW.1	SKIP IF SCAN CNT -1	30C07480 30C07490
08C2 0 6BEB 08C3 0 1801	STX 3 R104+1 RESET EMIT CHAR CNT SPA 1 SHIFT LAST LINE	30C06820 30C06830			090C 0 70F5 090D 01 74FF08DF	MDX AC15 MDX L LPCNT,-1	AFTER 50 CONSECUTIVE	30 C0 75 00 30 C0 75 10
08C4 0 7101	MDX 1 1 IN PATTERN	30C06840	O	$\mathbf{O}_{i,\alpha}$	090F 0 70EC	MDX AC 20	EMITS - SPACE	30C07520
08C5 0 7302	MDX 3 2 •	30C068 50 30C068 60	_		0910 0 7002	MDX AC35+2	THEN CONTINUE	30C07530 30C07540
08C6 01 6F00069C 08C8 01 6D00068C	P1041 STX L3 STPPT SET FOR PATTERN SPACE STX L1 P15+1	30C06870 30C06880	Û	$\mathbf{O}_{\mathbf{C}}$	0911 01 4400072F AC35 0913 0 6101	BSI L A1 LOX 1 1	SET PRINT BUFR TO ONES SET SCAN CNT	30C07550 30C07560
08CA 01 6E00068E	STX L2 P16+1	30C068 90	Q	0	0914 01 6D0006D4	STX L1 SCNCT		30C07570
08CC 0 6176 08CD 01 6D0006D4	LDX 1 118 SET SCAN COUNT STX L1 SCACT	30C06900 30C06910	Ü		0916 01 440006EC	BSI L PRINT		30C07580 30C07590
08CF 00 D4006C20 08D1 01 443006EC	STO L 32 SET 1ST BUFR WORD BSI L PRINT GO PRINT	30C06920 30C06930	်ဂ	0	0918 01 74010904 AC40 091A 0 70D7	MDX L AC30+1.1 MDX AC15	ADV TO NXT CHAR	30C07600 30C07610
		30006940	•		091B 01 4400C60A	BSI L CNTRL	GO TO CENTREL RTN	30C07620
08D3 01 740109AE	R105 MDX L R104+1-1 ADV CHAR FOR NXT SCAN NOP SAFETY NOP	30C06 950 30C06 960	0	Ô	091D 0 70D2 #	MDX AC14	LOOP ROUTINE RETURN	30 C0 76 30 30 C0 76 40
08D6 01 74FF08DE 08D8 0 70C3	MOX L LINES,-1 ADV LINE CNT MDX R102	30C069 70 30C069 80		! !	* *			30 C 0 7 6 5 0 30 C 0 7 6 6 0
	•	30006990	O	\circ	•	TEST ROUT	INE 7	30C07670
08D9 01 4400060A 08DB 0 70BE	BSI L CATRL GO TO CONTROL RTN MOX R101 LOOP ROUTINE RETURN	30C07000 30C07010	_	_	* * TH	IS ROUTINE PRINTS L	INES OF ALL DE CHARACTER	30 C0 76 80 30 C0 76 90
	* CONSTANTS AND STORAGE	30C070 <i>2</i> 0 30C070 <i>3</i> 0	Ü	()	091E 0 6107 #010	LDX 17		30C07700 30C07710
	•	30C07040	0)	091F 01 6D0005DD	STX L1 PRROU	STORE RTN NO	30 CO 7 7 20
08DC 0 8000 08DD 0 0000	SET DC /8000 EMIT DC O EMITTED CHARACTER	30C07050 30C07060	ν,)	.)	0921 01 6C0009CD 0923 01 440007B0	STX L UERR9 BSI L FORMS	SET LOOP ADDRS CK FOR READY	30C07730 30C07740
08DE 0 0000	LINES DC O LINE COUNT	30C07070 30C07080	0	9	0925 01 44000723 0927 01 44000707	BSI L CLEAR BSI L SPACE		30C07750 30C07760
08DF 0 0000 08E0 0 0000	CHARC DC 0 TEMPORARY STORAGE	30007090			0929 01 44000707	BSI L SPACE		30C07770
08E1 0 0031 08E2 0 0032	NO49 DC 49 NO50 DC 50	30C07100 30C07110	0	0	092B 0 6164 AD10	5 LDX 1 100	SET LINE COUNT	30 C 07780 30C07790
	*	30C07120 30C07130			092C 0 69B1	STX 1 LINES		30 C0 7 8 00 30 C0 7 8 10
	TEST ROUTINE 6	30C07140	O	0		BSI L A1	SET PRINT AREA TO ONES	30C07820
	* THIS ROUTINE PRINTS LINES OF ONE CHAR	30C07150 30C07160			092F 00 65008200 0931 01 6D0006D8	LDX L1 /8200 STX L1 MSK2	SET MASK FOR PRINT	30 C0 7 6 30 30 C0 7 8 40
	* UNTIL ALL 48 CHARACTERS HAVE BEEN PRINTED	30C07170 30C07180	O,	0	0933 0 6101 0934 01 440006EC	LDX 1 1 BSI L PRINT	SET SCAN CNT GO PRINT	30C07E50 30C07860
08E3 0 6106	AC10 LDX 1 6	30 CO 71 90	^		•			30C67870
08E4 01 6D0005DD 08E6 01 6C0009CD	STX L1 PRROU STORE RTN NO STX L UERR9 SET LOOP ADDRS	30C07200 30C07210	Ú	.	0936 01 74FF08DE A012 0938 0 70F4	MDX L LINES,-1 MDX A011	UPDATE LINE COUNT	30C07880 30C07890
08E8 01 440007B0	BSI L FORMS CK FOR READY	30C07220 30C07230	. 0	0	0939 01 4400060A 093B 0 70E2	BSI L CNTRL MDX AD10	GO TO CONTROL RTN LOOP ROUTINE RETURN	30C07900 30C07910
08EA 01 44000723 08EC 01 44000707	BSI L CLEAR BSI L SPACE	30C072 40	•,5	• •	•			30C07920
08EE 01 44000707	BSI L SPACE	30C07250 30C07260	0	ŋ		IS IS THE TABLE OF OPER SCAN EMIT SEQU		30C07930 30C07940
08F0 0 61D0	AC14 LDX 1 -48	30007270	-			DC /F100		30C07950
08F1 0 6912	STX 1 AC30+1 SET CHAR CNT	30C07280 30C07290	O	0	093D 0 F200	DC /F 200	2	30C07 960 30C07 970
08F2 0 6132 08F3 0 69EB	AC15 LDX 1 50 SET EMIT LOOP CNT STX 1 LPCNT	30C07300 30C07310			093E 0 F300 093F 0 F400	DC /F300 DC /F400	3 4	30C07980 30C07990
USF 3 U U7E8	and the second of the second o		0	0				, .
		DDOC 10 020C 1			DATE 02 IANGS 01 MA	V44 01 1111 44		0000 10 0300 1

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. 2191			IBM MAINTENANCE DIA	AGNOSTIC PROGRAM FOR T	HE 1130 SYSTEM	PART NO. 2 Page	191220 7 A
1132 PRINTER FUNCTION TEST	PAGE	· 7	0	1132 PRINTER FUNCTI	ION TEST		PAGE	•
1192 PRINTER PONCTION TEST		·· •	0					
0940 0 F500 DC /F500 5 0941 0 F600 DC /F600 6	30C08000 30C08010		0	0980 0 4041 0981 01 4C80097C	BSI UERR BSC I ERR7	GO TYPE MESS	30C08700 30C08710 30C08720	.·
G942 0 F700 DC /F700 7 G943 0 F800 DC /F800 8 G944 0 F900 DC /F900 9	30C08020 30C08030 30C08040	()		0983 0 0000 0984 01 000006E2	ERRX DC 0 XIO L SENSE	COMMON ROUTINE Sense DSW	30C08730 30C08740	
0944 0 F900 DC /F900 9 0945 0 F000 DC /F000 0 0946 0 7E00 DC /7E00 =	30C08050 30C08060	0	O	0986 01 D40009E0 0988 0 C82F	STO L ERMO LDD MES8	STO DSW IN MESS LD ALPHA MESS	30C08750 30C08760	·
0947 0 5800 DC /5800 \$ 0948 0 4800 DC /4800 •	30 C0 8 0 70 30 C0 8 0 80	0	\mathbf{O}	0989 0 6201 098A 0 4037	LDX 2 1 BSI UERR BSC I ERRX	SET WORD CNT GO TYPE MESS	30C08770 30C08780 30C08790	•
094A 0 6500 DC /6800 •	30C08090 30C08100 30C08110	0	0	098B 01 4C800983	* ERR9 DC 0	ERROR 9 MESSAGE	30C08800 30C08810	
094B 0 5000 DC /5000) 094C 0 6000 DC /6000 - 094D 0 4000 DC /4000 (30C08120 30C08130			098E 0 6109 098F 0 C82A	LDX 1 9 LDD MES9	ED ALPHA MESS	30C08820 30C08850	
094E 0 4E00	30C08140 30C08150	Ο	O	0990 0 6202 0991 0 4030	LDX 22 BSI UERR BSC I ERR9	SET WORD CNT GO TYPE MESS	30C08860 30C08870 30C08880	·
0950 0 5000 DC /5000 + 0951 0 5000 DC /5000 +	30 C 0 8 1 6 0 30 C 0 8 1 7 0 30 C 0 8 1 8 0	0	• •	0992 01 4C80098D	BSC I ERR9 * ERR10 DC 0	ERROR 10 MESSAGE	3C CO 88 90 3C CO 89 90	
0952 0 D100 DC /D100 J 0953 0 D200 DC /D200 K 0954 0 D300 DC /D300 L	30C08190 30C08200	0	0	0995 0 6110 0996 0 C825	LDX 1 /0010 LDD MES10	LD ALPHA MESS	30C08910 30C08920	
0955 0 D400 DC /D400 K 0956 0 D500 DC /D500 N	30C082 10 30C082 20		9	0997 0 6202 0998 0 4029 0999 01 4400060A	LDX 2 2 BSI UERR BSI L CNTRL	SET WORD CNT GO TYPE MESS	30C08930 30C08940 30C08950	
0957 0 D600 DC /D600 D 0958 0 D700 DC /D700 P	30 C0 8 2 30 30 C0 8 2 40 30 C0 8 2 50			0998 01 40000847	BSC L SC15		30C08960 30C08970	
0959 0 D800 DC /D800 Q 095A 0 D900 DC /D900 R 095B 0 C500 DC /C500 E	30C082 60 30C082 70	0	• •	099D 0 0000 099E 0 6111	ERR11 DC 0 LDX 1 /0011	ERR 11 MES SAGE	30C08980 30C08990	
095C 0 C700 DC /C700 G 095D 0 E600 DC /E600 W	30 C 0 8 2 9 0	, <u>O</u>	o	099F 0 C81E 09A0 0 6201 09A1 0 4020	LDD MES11 LDX 2 1 BSI UERR	LD ALPHA MESS SET WORD CNT GO TYPE MESS	30 C 09 000 30 C 09 010 30 C 09 020	
095E 0 E700 DC /E700 X 095F 0 E800 DC /E800 Y 0960 0 E900 DC /E900 Z	30 C 0 8 3 0 0 30 C 0 8 3 1 0 30 C 0 8 3 2 0	0	0	09A2 01 4C80099D	BSC I ERR11		30C09030 30C09040	
0961 0 C100 DC /C100 A 0962 0 C200 DC /C200 B	30 C0 83 30 30 C0 83 40			09A4 0 0000 09A5 0 6112	ERR12 DC 0 LDX 1 /0012	EPROR 12 MESSAGE	30C09050 30C09060	
0953 0 C300 DC /C300 C 0964 0 C400 DC /C400 D	30 C 0 8 3 5 0 30 C 0 8 3 6 0		• • • • • • • • • • • • • • • • • • •	09A6 01 C40006D8 09A8 0 - C038 09A9 0 - C816	LD L MSK2 STO ERM5 LDD MES12	SET S/B IN MESSAGE LD ALPHA MESS	30 C 090 70 30 C 090 8 0 30 C 09 090	
0965 0 C600 DC /C600 F 0966 0 C800 DC /C800 H 0967 0 C900 DC /C900 I	30C08370 30C08380 30C08390	\circ	0	09AA 0 6202 09AB 0 4016	LDX 22 BSI UERR	SET WORD CNT GO TYPE MESS	30 C 09 10 0 30 C 09 110	
0968 0 E200 DC /E200 S 0969 0 E300 DC /E300 T	30 CO 8 4 00 30 CO 8 4 10	Ú	0	09AC 01 4C8009A4	# ERR12 DC O	ERROR 13 MESSAGE	30C09120 30C09130 30C09140	
096A 0 E400 DC /E400 U 096B 0 E500 DC /E500 V 096C 0 F100 DC /F100 1	30 C0 84 20 30 C0 84 30 30 C0 84 40	\circ	. 0	09AF 0 6113 09B0 0 C809	LDX 1 /0013 LDD MES9	LD ALPHA MSG	30C09150 30C09160	
096C 0 F100 DC /F100 1 THIS SET OF SHCRT ROUTINES SETS UP	30C08450 TO TYPE 30C08460		_	09B1 0 6202 09B2 0 400F	LDX 22 BSI UERR	SET WORD CNT GO TYPE MSG	30 C0 91 70 30 C0 91 80	
* DIFFERENT ERROR MESSAGES.	30 C 0 8 4 7 0 30 C 0 8 4 8 0	\mathbf{O}) ()	0983 01 4C6009AE	BSC I ERR13 * BSS E 0		30009150 30009260 30009210	
096D 0 0000	GE 30C08490 30C08500 30C08510	0	• •	0986 1 09E3 0987 1 09EE	MES7 DC IVCLM DC WSB	INVLD EMIT WAS S/B	30C09220 30C09230	•
0970 01 4C80096D 8SC 1 ERR4	30C085 20 30C085 30	0	Ō	0988 0 0041 0989 0 0000	MESB DC ANINT DC 0	NO INTRPT	30C09240 30C09250	
0972 0 0000	30C08540 30C08550 30C08560	0	9	098A 1 09E3 09BB 0 0000 09BC 1 09F8	MES9 DC IVCLM DC 0 MES10 DC CH1	INVLD EMIT	30C09260 30C09270 30C092 <i>6</i> 0	
0974 0 400E BSI ERRX 0975 1 4C800972 BSC I ERR5	30C085 70 30C085 80			09BD 0 0000 09BE 1 0A00	DC 0 MES11 DC IVDSW	INVLD DSW	30C09290 30C09300	
0977 0 0000 ERR6 DC 0 ERROR 6 MESSA 0978 0 6106 LDX 1 6	GE 30C08590 30C08600	0) O	09BF 0 0000 09C0 1 0A00	DC 0 MES12 DC IVDSW	INVLD DSW	30C09310 30C09320	
0979 0 4009 BSI ERRX 097A 01 4C800977 BSC I ERR6	30C08610 30C08620 30C08630	C	0	09C1 1 09EE	DC WSB * * THIS ROUTINE TYPES	WAS S/B THE ERROR MESSAGE	30C09330 30C09340 30C09350	
097C 0 0000		o	ဂ	0902 0 0000	+ Uerr DC 0		30 C0 9 3 60 30 C0 9 3 7 0	
097E 0 C837 LDD MES7 LD ALPHA MES 097F 0 6203 LDX 2 3 SET WORD CNT	S 30 C 0 B 6 80		0	09C3 0 6919 09C4 0 6A16	STX 1 ERM1 STX 2 ERM	SET ID IN MESSAGE BUFFER SET WD CNT IN MESS	30C09380 30C09390	

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IBM MA	INTENANCE DIA	AGNOST IC	PROG	RAM	FOR THE	: 1130 SYSTEM PART NO. 2191220	0	0
1132 P	RINTER FUNCT!	ION TEST	•			PAGE 8	0	0
							0	0
0905 0 0906 0 0907 0	D818 1810 1 D40307A9		STD SRA STO	L	ERM2 16 CKESW	30C09400 RESET ERROR 30C09405 SWITCH 30C09406	0	0
09C9 0 09CB 1	0 44800012 09DB	♥ UERR 2	BSI DC	1	ERROR ERM	30C09410 30C09420 30C09430	o	0
09CC 1 09CD 0	09D3 0000	UERRS	DC DC		UERR6 0	BUSY 30C09440 LOOP ON ERROR 30C09450 30C09460	0	0
	COF3 1 D40005E4 0 4C800011		LD STO BSC	L I	UERR PST32 START	30 C 0 9 4 7 0 30 C 0 7 4 8 0 30 C 0 9 4 9 0	0	0
0903 0 0905 0	1 650009C9 1 600005E4	UERR 6	LDX STX	L1 L1	UERR2 PST32	BUSY, SET MLCSF 30C09500 30C09510	0	9
ט זטלט 0	0 40806011	* *	BSC	1	START	30C09520 30C09530 30C09540	0	∵
09DA	0001	•	BSS	E	1	USED BY SUBROUTINE ERROR 30C09550 30C09560 30C09570	0	•)
09DB 0 09DC 0 09DD 0	000 0	ERM ERM1	DC DC		0 0 0	WORD COUNT 30C09580 HEX 30C09590 ID 30C09600	0	
09DE 0 09DF 0 09E0 0	0000 0000 0000	ERM2 ERM3 ERM4	DC DC DC		0 0 0	1ST ALPHA MESSAGE ADDRESS 30C09610 2ND ALPHA MESSAGE ADDRESS 30C09620 MODIFIERS 30C09630		0
09E1 0 09E2 0	0000	•	DC OC		0	30 C 0 9 6 4 0 30 C 0 9 6 5 0 30 C 0 9 6 6 0	0	0
09E3 0	2200	* ALPH * IVCLM		SAG	/2200	30C09670 30C09680 30C09690	O	0)
09E4 0 09E5 0 09E6 0	7600 8600 5600		DC DC DC		/7600 /8600 /5E00	N 30C09700 V 30C09710 L 30C09720	Ō.	9
09E7 0 09E8 0 09E9 0	3200 2100 3600		DC DC		/3200 /2100 /3600	D 30C09730 30C09740 E 30C09750		. .
09EA 0 09EB 0 09EC 0	7200 2200 9500		DC DC DC		/?200 /2200 /9E00	M 30C09760 I 30C09770 T 30C09780	0	0
09ED 0	FFFF	*	DC		/FFFF	30C09790 30C09800	Ò	0
09EE 0 09EF 0 09F0 0	2100 9200	WSB	DC DC		/800 0 /210 0 /920 0	30 C 0 9 8 2 0 W 30 C 0 9 8 3 0	0	0
09F1 0 09F2 0 09F3 0	9A00 2100		DC DC		/3E00 /9A00 /2100	\$ 30C09850 30C09860	O	0
09F4 0 09F5 0 09F6 0	BC00 1A00		DC DC		/9AGO /BCOO /1AJO	3 0 C 0 9 8 8 0 8 3 0 C 0 9 8 9 0	0	0
09F7 0	1EC 0	* CH1	DC		/FFFF /1E00	30C09900 30C09910 C 30C09920	0	0
09F9 0 09FA 0 09FB 0	2600 3E00 7600		DC DC DC		/2600 /3E00 /7600	H 30C09930 A 30C09940 N 30C09950	Ò	0
09FL 0 09FD 0 09FE 0	7600 3600 5E00		DC DC		/7600 /3600 /5E00	N 30C09960 E 30C09970 L 30C09980	Ü	0
095F 0	2200	*			/FFFF /2200	30C09990 30C10000 30C10010	0	0
0A01 0 0A02 0 0A03 0	7600 8600 5E00		DC DC		/7600 /8600 /5E00	N 30C10020 V 30C10030 L 30C10040	0	0
OA04 0	3200		DC		/320 0	D 30C10050	0	0
DATE EC NO.	02JAN66 415490	01MAY6 415450	66 0 B 4	1 Ju	1L66 90C	PROG ID 030C-1 PAGE 8	0	•

IBM MAI	NTENANCE D	I AGNOST I	C PROG	RAM FOR TH	HE 1130	SYSTEM	PART NO. 2: Page	191220 8 A
1132 PR	INTER FUNC	TION TES	т					
0A05 0 0A06 0	2100 3200	DSW1	DC DC	/2100 /3200	Ď		30C10060 30C10070	
0A07 0 0A08 0 0A09 0	9A30 9200 FFFF		DC DC	/9A00 /9200 /FFFF	S W	**	30C10080 30C10090 30C10100	
AOA	05E8	•	END	STRT			30C10110 30C10120	

01MAY66 01JUL66 415450B 415490C 02JAN66 415490

PROG ID 030C-1 PAGE 8A

				• 0	0				
TRM MA	INTENANCE O	DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. 2191220	0	0	IBM MA	INTENANCE D	DIAGNOST IC PROGRAM FOR THE 1130 SYSTEM	PART NO. 2191220
	INTERNACE C	THOUSE THOUSEN FOR THE 1130 STSTEM	PAGE 9	J					PAGE 9A
1132 P	RINTER FUNC	CTION TEST		0	0	1132 PI	RINTER FUNC	CTION TEST	
				ø	0				
CROSS REFERENCE LISTING						ERM4 ERM5	09E0 09E1	063C,0644,0648,064E,06B7,077A,07BE,0986 0766,0795,0864,09A8	
SYMBOL	VALUE	REFERENCES		. 0	0	·ERM6	09E2	0798	
AC10 AC14	08E3 08F0	062F 091D				ERROR ERRX	0012 0983	05DC,09C9 096F,0974,0979,098B	
AC15	08F2	090C,091A		0	0	ERR10	0994	0866	
AC20 AC30	08FC 0903	08F8,090F 08F1,08FB,0918			_	ERR11 ERR12	099 D 09 A 4	07C0,09A2 064A,09AC	
AC35	0911	0908,0910	·	, 0	0	ERR13 ERR4	09AE 096D	0774,05B3 06FE,0970	
AC40 ADSCT	0918 0058	05 0 C		•	^	ERR5	0972	0850,0575	
AEND	0037	05DC 05DC		<u>.</u>	()	ERR6 ERR7	097 7 097C	0719,057A 07CA,079D,0981	
AINT AIVD	0044 0038	05DC		•	<u> </u>	ERR9	U98D	0761,0592	
ALD Andem	003E 07AC	05DC 06U0,074F,0750,0779,077D		0	. 0	ETRAP FFE	0018 0748	05CC 06AA,0768,076F	
ANDOR	07AS	05FE,077C		0	0	FOMSK FORMS	07D1 07B0	0786 0718,0788,07C2,07CA,07FA,0816,0833,0845,088F,08E8,	
ANINT ANR DY	0041 0048	05 DC , 0 SB 8 05 DC , 0 7D 5		(,		FURMS	0780	0923	
A010	091 E	0630,053B			0	HALT ICT	0014 0747	05DC 0635.0738.0742	
A0105 A011	092B 092D	0938		(/	•	ICTR	0738	06FC,0717,0745,0859,C868	
A012 AQ5A	0936 0019	Φ . The second contract of the second contract Φ		0	0	ICTR1 ICTR2	073C 0742	0744 073C	
ARDY	004C	05DC			,	IDLE	06D5	0660,0664,0681,06F2	
ASB ASCT	0054 005A	05DC 05DC		\cap	O	IDLSW Ilcrp	06D6 0030	0661,0884,090A 05DC	
ASWS	0050	05DC				ILIR Ilpat	0036 0032	05DC 05DC	
AWAS Al	0060 072F	0736,0511,0920		\circ	0	ILO	0028	05DC	
A110	0732	0735 05DC,05E8				IL1 IL2	0029 002 A	05DC,05F4 05DC	•
BEGIN BSWO	0010 05DE	060B,0611,0623,070C,07E8,084A		· ()	O	IL3	00 ? B	05 DC	
BSW1 BSW2	05DF 05E0	060E,061B,0621,071D,084F 0603,089E,08F4				IL4 IVCLM	002C 09E3	05DC 09B6,05BA	
BSW3	05E1	0607,067F		\cap) .	IVDSW KFF00	0A00 07AA	09BE,09C 0 0752	
CCF '	06D2 07F3	0680,068E,086A 062A	•			LINES	08DE	089B; 08D6, 092C, 0936	
CEll	07FC	080E		Ō	$\mathbf{O}_{\mathbb{R}^n}$	LOG LOGBY	0013 0016	05 DC ₁ 0 7C 4 05 DC	
CE12 Char	075F 093 C	0809 0759,078D,0799,08AF,0906		_		LPCNT	08DF	07FD,0607,0819,0826,089D,08B7,08F3,090D	
CHARC CH1	08E0 09F8	076D,078B,0797,07A5 09BC		\cap	()	MES10 MES11	09BC 09BE	0996 099F	
CKEMT	0786	065E,0789,07A0,07A7		- 0	α	MES12	09C0 09B6	09Å9 097E	
CKEM1 CKESW	07A2 07A9	0791 0604,0639,064C,0700,0708,0763,0776,0787,07 9F ,0 9C 7		()	`.)	MES7 MES8	0988	0988	
CLEAR	0723	0679,072D,07F8,0814,0891,08EA,0925		Ö.	\mathbf{c}	MES9 MSK1	09BA 06D7	098F,0980 063E,0646	
CL10 CNTRL	072 6 060 a	0729 0608,0613,080C,0828,083D,0878,08D9,0918,0939,0999		`,'	•	MSK2	0608	0640,067D,0713,0801,0820,0855,08A8,08FE,0931,09A6	
CN10 CN12	060E 0615	05FA,0609,0617,061F,0622		0	\circ	NO49 NO50	08E1 08E2	08FA 08A4	
CN13	0617					ONES OREM	06EA 07AD	0731 0748,074C,0751	
CN14 CS10	061B 080F	0610,071F,0851 062B		0	\circ	PIA	064E	0638,0642	
CS11	0818	0820				PIE Pint	064 4 0659	0650	
CS12 DLY	0818 07D8	0828 07C9,07DE		Ũ	\triangle	PIRT	0632	05F2,0674,6784	
DLYCT DLY1	07E6 07DB	07DA,07DB 07E0			•	PIS PI1	0667 0672	0658 066F,0684,0685,06A6,06C1,06D1	
DSW1	0A06			O	Ú	PI2 PI3	0676 0682	0662,0698 0666,06AC	
DSW32 Emit	06E0 08DD	0637,0688 0668,06E4,0749,074D,0758,0764,078F,0793,0881,0905				PI4	0686	0678+06A9	
ENTCT	N7AB	05FC,0771,077F	•	Ü.	()	PI5 PI6	068B 068D	06A2+08C8 06A3+08CA	
END ERM	0615 0908	05DC,0627 09C4,09CB		^	$\mathbf{O}_{\mathbf{C}}$	PI7	069D	0695	
ERM1 ERM2	09D D 09DE	09C3 09C5		Û	,	PI8 Prdia	06 AA 05 F8	065D 05E3,05EE,061E,0625	
ERM3	09DF		. .	o	0	PREND	0623	0631	
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1132 PR[NTER FUNC	CTION TEST			0	0	1132 PF	RINTER FUN	CTION TEST	•	•					
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	06EC	06EF,0705,0805,0824,08AB,08D1,0901,0916,0934				•	UERR6 UERR9	09D3 09CD	09CC	.0831.0843.0	08 8D , 08E6 , 0 92	21				
PRPST	06FC 05DC	06F8 05EA,0629 07F4,0810,082F,0841,088B,08E4,091F			0	0	ULOG1 ULOG2	07C4 07CB	0788,07CB	,0032,00				i da di di di di di di di di di di di di di	• .	
PRSET	05DD 05EB	05E2,05F6			0	0	ULOG3 WSB	07CD 09EE	0987,09C1							
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RQKB	06E4 0034	0659 05DC			0	0					•					
RRO1	0033 0889	05DC 062E				•								•		
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R102	089A 089C	08DB 08B6,08D8			0	0			• .							
R104	08A6 08AD	08 A2, 0 EB9 08 98, 0 EA 5, 0 BC 2, 0 8D3				•				•				4		
R105	08C6 08D3	08C0			Ü	0							•			
R1153	08BC 07A5	08B2,08BB 07A3		3 7	Ö	•										
SCNCT	0888 C6D4	0676,06ED,08CD,0914			ι,,	J						•				
SCTM1	087E 087F	06B1,0849,0860,0877 0848,086E,0873,0876			0	0				•						
SC15	0840 0847	062D 087D,059B			0	•										
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SENSE	06E2 08DC	066D,0682,06EE,06F6,07B4,0984 08BC			Ů.	, O					•					e e e
SKCH	06C2 06AD	068A 0653,0888			9	o										
SKM	06D3 0880	0689 0683,0862				_						•	•			
SK10	06BF 0707	06BC 06F0,0721,0837,0893,0895,08EC,08EE,0927,0929			0	O						•				
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STCAR	06E6 07D2	0857 07C6				,				,			27			
STM1	07D7 07E7	0787,078D 06CC,070F,07EB,07ED,084D			0)						•				
STPCA	06E8	06AD,085B			0	o										•
STPRT	06DC 06DA	05EC,066A,06A4,06A8,0777,080A,0829,08C6 065B,06FA,06F3,0756	•		İ											
STSPA	05E8 06DE	0A0A 0689,069D,0715		•	0	\mathbf{O}										
ST10	0759 076A	0760 0750		•	0	<u>a</u>										
ST20	076D 0771	076B 0753				. • • • • • • • • • • • • • • • • • • •										
SVKB	0784 0035	0773 05DC			0											
UERR	09C2 09C9	0980,098A,0991,0998,09A1,09A8,09B2,09CE 09D3			0					.						

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1442 READER/PLACH FUNCTION TEST

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1442 READER/PUNCH FUNCTION TEST

11 PURPOSE

THE 1442 CARD READ/PUNCH DIAGNOSTIC PROGRAM CHECKS THE UPERATING PERFORMANCE OF THE 1442 CARD READ/PUNCH.

2. PRERFCUISITES

2.1 PRUGRAM PREREQUISITES

THE 1442 CARD READ/PUNCH DIAGNOSTIC PROGRAM MUST RUN UNDER CONTROL OF THE DIAGNOSTIC MONITOR.

2.2 EQUIPMENT PREREQUISITES

THE FULLGWING EQUIPMENT IS REQUIRED.

- A. 1131 CENTRAL PROCESSING UNIT (CPU).
- B. 1442 CARD READ/PUNCH.

3. USE PROCECURE

3.1 LOADING

THIS PROGRAM FOLLOWS THE LOADING PROCEDURES ESTABLISHED BY THE 1130 DIAGNOSTIC MONITOR. REFER TO D. M. DOCUMENTATION.

THE FOLLOWING REQUIREMENTS MUST BE MET.

- 1. NO OTHER PROGRAM DECK SHOULD FOLLOW THE 1442 FUNCTION TEST
- 2. PROGRAM DECK SHOULD BE FOLLOWED BY A DECK OF BLANK CARDS ABOUT 5 INCHES THICK.
- 3.2 OPERATION
- 3.2.1 PRCGRAM EXECUTION
 - A. LOAD AND GO MODE

ALL ROUTINES WILL BE EXECUTED WITH NO OPTIONS
ALL CETECTED ERRORS WILL BE IDENTIFIED BY AN ERROR TYPEOUT.

B. SINGLE PROGRAM AND OVERLAP MODE

AFTER PROGRAM IS LOADED. THE MONITOR WILL WAIT TO ALLOW OPTIONS TO BE SPECIFIED.

- 1. SPECIFY DESIRED OPTIONS AS INSTRUCTED IN SECTION 3.2.2. IF NO OPTIONS ARE DESIRED, NO ENTRY IS REQUIRED.
- 2. TO START EXECUTION EXECUTE MODE MUST BE SPECIFIED SET BIT SWITCHES FOR DESIRED MODE

SW: SETTING CONTROL

0080 EXECUTE WITH NO OPTIONS CORR LOOP ON ERROR

0084 BYPASS ALL ERROR PRINTOUTS

082 HALT UN ANY ERROR 08C LOOP ON ERROR AND BYPASS ALL ERROR

PRINTOUTS

0090 LOOP ALL PROGRAMS

092 LOOP ALL PROGRAMS AND HALT ON ERRORS

PRESS INTERRUPT REQUEST KEY.

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PROG ID

PAGE

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1442 READER/PUNCH FUNCTION TEST

3.2.2 PREGRAM OPTIONS

THE OPERATOR MAY MODIFY THE EXECUTION OF THE PRUGRAM ANY TIME BEFORE OR AFTER IT HAS STARTED EXECUTION BY ENTERING PROGRAM CONTROL OPTIONS UR ROUTINE SELECTION OPTIONS.

- A. PRUGRAM CONTROL OPTIONS
 - 1. TO SELECT PROGRAM OPTIONS SET BIT SWITCHES AS INDICATED

SW: SETTING CONTROL

RESET ALL CONTROL OPTIONS **OF00**

BYPASS ALL 1442 LOGS 0F08 BYPASS ALL 1442 ERROR PRINTOUTS 0F20 LOOP A 1442 ROUTINE LOG ALL 1442 ERRORS 0F40 0F24 LOOP ROUTINE AND BYPASS 1442 LOGS. 0F28 LOOP ROUTINE AND BYPASS 1442 FRROR PRINTOUTS. LOOP ROUTINE AND LOG ALL 1442 ERRORS.

- 2. PRESS INTERRUPT REQUEST KEY.
- B. ROUTINE SELECTION

EXECUTION WILL START WITH THE SELECTED ROUTINE.

1. TO SELECT ROUTINE OPTIONS SET BIT SWITCHES AS INDICATED

SW. SETTING ROUTINE

ALL ROUTINES 4F00 4F80 1. CHECK DSW 2. FEED-READ-PUNCH 4F20 3. READ ONLY 4. PUNCH ONLY 4F10 5. READ. THEN PUNCH WHAT WAS READ 4FOR 4F 04 6. SELECTED DATA

- 2. PRESS INTERRUPT REQUEST KEY.
- 3.3 TERMINATION

IF THERE ARE NO *LOOP* CONTROL OPTIONS SELECTED, THE PROGRAM WILL TERMINATE AFTER ONE PASS. IF OPTIONS TO LOOP HAVE BEEN SELECTED. THE PROGRAM MAY BE FERMINATED BY-

- 1. REMOVE LOOP OPTIONS AND ALLOW NORMAL TERMINATION.
- 2. SET ENTRY SWITCHES TO 400F AND PRESS THE INTRPT REQ. KEY.
- RESTART 3.4

TO RESTART THE PRUGRAM.

- 1. SET SWITCHES TO 408F.
- 2. PRESS INTERRUPT REQUEST KEY.
- 3. SET SWITCHES TO 0080.
- 4. PRESS INTERRUPT REQUEST KEY.

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1442 READER/PUNCH FUNCTION TEST

NOTE

DEFENDING ON HOW THE PROGRAM WAS TERMINATED. THE LAST TWO STEPS MAY NOT BE PEQUIRED.

4. PRINTOUTS

ALL PRINTOUTS ARE IN THE STANDARD FORMAT.

APPNN CORR (MESSAGE) EPPNN OORK (MESSAGE)

> WHERE A IDENTIFIES STATUS MESSAGES F IDENTIFIES ERROR MESSAGES PP IS THE PID OF THE PROGRAM CAUSING THE MESSAGE IS THE MESSAGE SEQUENCE NUMBER IS THE ROUTINE NUMBER MESSAGE IS ANY VARIABLE INFORMATION

STATUS MESSIGES (AOFXX) RR= ROUTINE NO. XX = MESSAGE NO.

ACF01 0006 ANY PATTERN PLUS BLANKS MAKE READY COMMANCS OPERATOR TO LOAD ANY PREPUNCHED CARD FULLOWED BY BLANK CARDS.

AOFO2 OORR BUSY THE 1442 WAS BUSY WHEN ITS DSW WAS SENSED. PROGRAM WILL CONTINUE.

AOFO3 OORR LAST CARD LAST CARD INDICATOR WAS ON WHEN 1442'S DSW WAS SENSED.

AOFO4 CORR LOAD FROM STK 2 MAKE READY NPRO AND PLACE CARDS IN STACKER NO. 2 IN THE READ HUPPEP AND PRESS START.

AOFOS OORR LOAD BLANKS MAKE READY LOAD PUNCH HOPPER WITH BLANK CARDS AND PRESS START.

AOFO6 OORR

1442 WAS NOT READY WHEN ITS DSW WAS SENSED. (TRY PUSHING 1442 START BUTTON 12

AOFC7 OORR PROG HALT

INDICATES PROGRAM HAS BEEN HALTED BY BIT SWITCH 15 (ON).

A0F08 0001 LGAD BLANKS MAKE READY

> THIS PRINTOUT WILL OCCUR IF A NON BLANK CARD IS ENCOUNTERED WHILE RUNNING RIN. 2 (PUNCH ONLY). NUTHING WILL BE PUNCHED IN THE NON BLANK CARD. THE PRINTOUT INSTRUCTS THE OPERATOR TO LOAD BLANK CARDS BEFORE CONTINUING THE 1442 TEST. AFTER THE 1442 IS MADE READY, THE OPERATOR MUST SET OFOC IN THE BIT SWITCHES THEN PRESS THE INTERRUPT REQUEST KEY.

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DATE OJMAY66 EC NO.

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1442 READER/PUNCH FUNCTION TEST

4.2 ERROR MESSAGES

EOFO9 OORR

WAS S/B COL

READ FRROR - MUDIFIERS SHOW INCORRECT DATA READ, WHAT DATA SHOULD HAVE BEEN, AND CARD COLUMN IN WHICH ERROR OCCURED.

EOFOA OORR

XXXX XXXX WAS S/B

DSW ERROR - MODIFIERS SHOW INCORRECT DSW FOLLOWED BY CORRECT DSW.

EOFOB OORR

NO INTRPT

NO INTERRUPT WAS RECEIVED AFTER A READ. FEED. OR PUNCH COMMAND WAS IN-

PROGRAM CONTINUES AFTER PRINTOUT.

5. CCMMENTS

5.1 ROUTINE 1 (CONSOLE ENTRY SWITCH NO. 8 ON)

ROUTINE 1 CHECKS THE STATUS OF THE 1442. BY LOOPING THIS ROUTINE, THE PROGRAM OPERATOR CAN USE AN OSCILLOSCOPE TO CHECK ANY DSW INDICATOR.

5.2 ROUTINE 2 (CONSOLE ENTRY SWITCH NO. 9 ON)

ROUTINE 2 CHECKS THE FEEDING AND PUNCHING FUNCTIONS. THE CARDS PUNCHED BY THIS ROUTINE ARE STACKED IN STACKEP NO. 2 OF THE 1442. THESE CARDS WILL BE USED IN ROUTINE 3.

5.3 ROUTINE 3 (CONSULE ENTRY SWITCH NO. 10 ON)

ROUTINE 3 READS IN STANDARD MODE (I.E., ONE COLUMN PER WORD). DIGITS 12 THROUGH 9 OF THE CARD ARE PLACED IN STORAGE BITS O THROUGH 11. BITS 12 THROUGH 15 ARE LEFT BLAMK. ALL DATA ARE CHECKED AGAINST THE DATA FROM WHICH THEY WERE PUNCHED. IF AN ERROR IS FOUND, A PRINTOUT COURS. THE ERROR PRINTOUT CONTAINS THE PID, ROUTINE NUMBER, BITS IN FRROR, THE CORRECT BITS (BOTH IN HEXADECIMAL NOTATION) AND THE COLUMN IN WHICH THE ERROR OCCURRED (ALSO IN HEXADECIMAL NOTATION).

5.4 ROUTINE 4 (CONSGLE ENTRY SWITCH NO. 11 ON)

ROUTINE 4 PUNCHES THE FIRST 40 COLUMNS OF A CARD AND PLACES THEM IN STACKER NO. 2. THE CARDS PUNCHED BY ROUTINE 4 ARE USED BY ROUTINE 5:

5.5 ROUTINE 5 (CONSULE ENTRY SWITCH NO. 12 ON)

ROUTINE 5 READS THE CARDS THAT WERE PUNCHED BY ROUTINE 4 AND CHECKS THE DATA READ AGAINST DATA PUNCHED. AFTER THE DATA IS CHECKED, THE FIELD IS REVERSED (I.e., COLUMN 1 IS PLACED IN COLUMN 60, COLUMN 2 IS PLACED IN COLUMN 79, ETC.). AFTER THE TIELD-REVERSING OPERATION THE READ AREA IS CLEARED. A PUNCH COMMAND IS INITIATED THAT WILL CAUSE THE LAST 40 COLUMNS TO BE PUNCHED. THIS KOUTINE DOES NOT AUTOMATICALLY CHECK THE PUNCHING UPERATION. HOWEVER, BY FOLDING EACH CARD PUNCHED BY THIS ROUTINE IN MALE (FOLDED BETWEEN COLUMNS 40 AND 41), THE HOLES MAY BE ALIGNED. PERFECT CORRESPONDENCE OF HOLES INPICATES SATISFACTORY RESULTS.

5.6 ROUTINE 6 (CONSOLE ENTRY SWITCH NO. 13 DN)

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ROUTINE 6 READS A CARD THAT IS PUNCHED BY THE PROGRAM OPERATOR AND PUNCHES THE DATA READ INTO A NUMBER OF BLANK CAPDS.
SATISFACTORY RESULTS ARE INDICATED BY A DIRECT CORRESPONDENCE BETWEEN THE HOLES IN THE PREPUNCHED CARD AND THE HOLES IN THE CARDS PUNCHED BY THE ROUTINE. THE COMPARISON MUST RE MADE BY THE PROGRAM OPERATOR.

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6. APPENDIX

6.1 SAMPLE OUTPUT

SAMPLE OUTPUT FOR

ROUTINE # 1

SAMPLE OUTPUT FOR

ROUTINE # 2

SAMPLE OUTPUT FOR ROUTINE #3

DATE 02JAN66 01MAY66 EC NO. 415490 415490B PROG ID 030F-*

184 87	LINTENANCE DI	AGNOSTIC PROGR	AN FOR THE	1130 SYSTEM	PART NO. PAGE	2191:24		IBM MA	INTENANCE DI	AGNOST I	C PKOG	RAM FOR THE	1130 SYSTEM
1442 F	READER/PUNCH	UNCTION TEST						1442 RI	EADER/PUNCH	FUNCTEC	N YEST		
· .								0500.0	2520	nev	DC	10500	2.0
0000		ORG	#+1500		30F10000 30F00010			05DC 0 05DD 0		PST	DC DC	/0F00 /0000	PID ROUTINE NUMBER
		*		PROG TRANSFER VECTOR	30F00020	e de la companya de la companya de la companya de la companya de la companya de la companya de la companya de		05DE 0		TELL	DC	70000	BIT SH FUNC O
		*			30F00030			05DF 0			DC	/0000	<u>1</u>
0010		BEGIN EQU	16		30F00040			05E0 0			DC DC	/0000 /0000	2
0011		STARY EQU ERROR EQU	BEGIN+1 Start+1		30F00050 30F00060			05E1 0 05E2 1	061B		DC	INILZ	INITIALIZATION ADDR
0012		LOG EQU	ERROR+1		30F00070			05E3 1	0622		DC	RTO	REPEAT
0014		HALT EQU	LOG+1		30F00080			05E4 0		MLSCF		/0000	1ST MLSCF NORMAL
0015		END EQU	HALT+1		30F00090			05E5 0			DC	/0000	2ND MLSCF BUSY
0017		# DCBY 5011			30F00100			05E6 0 05E7 0			DC DC	/0000 /FFFF	3RD MLSCF TEST INTR TERMINATOR
0016 0017		LOGBY EQU RSTKB EQU	END+1 LOGBY+1		30F00110 30F00120			052. 0		存	50	****	VEN.II MATON
0018		ETRAP EQU	RSTKB+1		30F00130					***	***	******	存在水物或物物物物物物物物物物物物物物物
0.019		AQSA EQU	ETRAP+1		30F00140					*			
		*			30F00150					********	·	DSH CHECK	FOR LEVEL O ******
0028 0029		ILO EQU	40 IL 0+1		30F00160 30F00170					St.			
002A		IL2 EQU	IL 1+1		30F00170			0588 0	0000	DSW14	DC	/000 0	
002B		IL3 EQU	IL2+1		30F00190				1 0C0008CA		NIO		SENSE DSW
0020		IL4 EQU	113+1		30F00200		A MARINE TO THE STATE OF THE ST	05EB 0		KEEP3		0	USE FOR TRAP
0030 0032		ILCRP EQU ILPAT EQU	IL 6+4 IL CRP+2		30F00210 30F00220				1 4C2805FC 1 F4000768		BSC	L CKRDR, +Z L CNTL1	CK RDR IF BO - 4003
0032		ROTY EQU	ILPAT+)		30F002 30				1 D40007D4			L HAS	SAVE DSW
0034		RQKB EQU	RQTY+1		30F00240				1 00000804		XIO	L PUNCH	PCH A COLUMN
0035		SVKB EQU	RQKB+1		30F00250			05F4 0	1 740108C4		MDX	L PUNCH,1	INCREASE PCH ADDR
0036		ILIR EQU	5VK3+1		30F00260			0554 0		*			
0037		AEND EQU	ILIR+1		30F002 70 30F00280				1 C40007D4 1 EC000774	LOOK	LD DR	L WAS L XERR	ACCUMULATED ERRORS
003B		AIVD EQU	AEND+4	INVLD	30F00290				1 4C8005E8		T	I DSW1A	HOUGHTED ERMONS
003E		ALD EQU	AIYD+3	LD	30F00300					#	1		
0041		ANINT EQU	ALD+3	NO INTRPT	30F00310				1 F4000767	CKRDR	EOR	L CNTLO	8003
0044 0048		AINT EQU ANRDY EQU	ANINT+3 AINT+7	INTRPY NRDY	30F00320	하는 맛은 좀 다니면 하는데요.			1 D40007D4 1 OC0008C8		STO	L WAS L READ	SAVE DSW READ COMMAND
3046		ARDY EQU	ANRDY+1	RDY	30F00330 30F00340				1 740108C8			L READ.1	INCREASE RD ADDR
0050		ASWS EQU	ARDY+4	SWS	30F00350			0604 0			MDX	LOOK	
0054		ASB EQU	ASWS+4	S/B	30F00360			100		\$			
0058 005A		ADSCT EQU	ASB+4	cr. cs	30F00370					春春本春春 春	•	DEH CHECK	EDD LEVEL & ASSUSANASA
0060		ASCT EQU AWAS EQU	ADSCT+2 ASCT+6	SELCT WAS	30F00380 30F00390					The state of the s	•	DSW CHECK	FDR LEVEL 4 *******
		2			30F00400					⊉			
		*			30F00410			0605 0		DSW4		/0000	ADDR OF RETURN
			***	· 李安安安安安安安安安安安安安安安安-	30F00420				1 000008CA	WEED!	XIO	L SENSE	SENSE DSW
		***	BIT SHITCH	SETTINGS ****	30F00430 30F00440			0608 0 0609 0	1000 1 F4000769	KEEP4		O L CNTL4	USE FOR TRAP CK FOR OP COMPLETE
		*			30F00440				1 EC000774			L XERR	ACCUMULATED ERRORS
		DBIT SH FUN	CTION CO.	FUNCTION O1	30F00460			060D 0	1 D40007D4		STO	L WAS	SAVE DSW BITS
		* 00- FUN	C CONTROL	TIME CONTROL	30F00470			060F 0			SLA	17	CLEAR ACC
			C CONTROL	FUNC CONTROL FUNC CONTROL	30F00480 30F00490				1 D4000774 1 C4000770	$\{x_{i,j}, \dots, x_{i-1}\}$		L XERR L SWA	ZERO OUT XERR
		. ⊅ 02- PRD	G IDENT	PROG IDENT	30F00500		period of the first		1 D400085C			L SW1	SET SWITCH IN RTL
			G IDENT	PROG IDENT	30F00510			0616 0	1 4C800605			I DSW4A	
			G IDENT	PROG IDENT	30F00520					2). 		erinwen -	0177117
			G IDENT	PROG IDENT PROG IDENT	30F00530 30F00540			$(x_i + x_i + F_i) = F_{i+1}$, $(x_i + x_i + F_i) = F_{i+1}$.		(1) (2) (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	X	STARTER R	OUTINE 含数容量的常数容量多数容积多数
			G IDENT	PROG IDENT	30F00550					#			
		* 08- STA	RT PROGRAM	SELECT ROUTINE 1	30F00560				0 44600010	GO		I BEGIN	CALL MONITOR
			E ALL ERROR!		30F00570			061A 1	05DC		DC	PST	ADDR OF PST
			P ROUTINE P PROGRAM	SELECT ROUTINE 3 SELECT ROUTINE 4	30F00580			061B 0	0000	± TNT1 2	. הר	•	
		and the second s	ASS ERR TYPE		30F00590 30F00600				1 65000622	INIL		O L1 RTO	
		⇒ 13- BYP	ASS LOG TYP		30F00610				1 600005E4			L1 MLSCF	
			SSIGNED	UNASSIGNED	30F00620			0620 0	1 4C80061B			I INILZ	
		\$ 15 HAL	T PROGRAM	SELECT ROUTINE END	30F00630					李 李安宗教学	· 10 16 16 16 16 16 16 16	勃然为勃勃的动物和西亚小山	to the the the the the the the the the the
					30F00640 30F00650					\$. ********	- 七かなる表演:	******************************	存在安全市中市市市市市市市市市市市市市市市市
		T29 ucaca	PROGRAM S	TARTER TABLES	30F00660					南京南京		RTO INITI	ALIZATION secessoses
					30F0/ \70								
DATE	02JAN66	DIHAY66			PROG ID	030F-A		DATE	02JAN66	OLMAY	66		공보하는 것이 이번 것을 보았다.
EC NO.	415490	4154908			PAGE	1		EC NO.	415490	41549			
				아이가 하는데 아이를 막으는 생각이 사용했다. 아	있으로 살고요 그녀를 받는 수는	그렇게 되어 있었다. 얼마 되었다고							

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130	SYSTEM

PART NO. 2191224

7

1442 READER/PUNCH FUNCTION TEST

		*				•		30F01370	
0622 01	650005E8	RTO	LDX	Ll	DSW1A		E	30F01390	
0624 00	6D000028		STX	L1	ILO	STORE INTR ZERO		30F01400	
0626 01	65000605		LDX		DSW4A	•		30F01410	
0628 00	6D000 030		STX	Ll	ILCRP			30F01420	
		*						30F01430	
	65000631	SET1	LDX		RT1	RT ADDR		30F01440	
062C 0			LDX		1	RT NUMBER		30F01450	
	44000893		BSI	Ļ	_	USE UPDATE RT	S C X	30F01460	
U62F UU	4C800011	•	BSC	I	START		^	30F01470 30F01480	
		****	****	***	******	******		30F01490	
		*						30F01500	
	,	****			ROUTINE 1-	CHECK STATUS *****		30F01510	
		*						30F01520	
0631 01	4400089C	RT1	BSI	L	SENSB	CHECK 1442 STATUS		30F01530	
0633 01	440007DC		BSI	L	KNOW	CHECK BIT SWITCHES	SC	30F01540	
		*						30F01550	
0635 01	6500063D	SET2	LDX			RT ADDR		30F01560	
063 7 0			LDX			RT NUMBER		30F01570	
	44000893		BSI	L		USE UPDATE RT	SC	30F01580	
063A 00	4C800011		BSC	I	START	RETURN TO MONITOR	X	30F01590	
		*						30F01600	
063C 0	0001	ONE	DC		1			30F01610 30F01620	
		****	****	***		*************		30F01620	
		*		***				30F01640	
		*****			ROUTINE 2-	FD A CARD OR PUNCH *		30F01650	
		*			110017112 2			30F01660	
		*						30F01670	
063D 01	C4000940	RT2	LD	L	WA40		E	30F01689	
063F 01	D400096A		STO	L	WAREA+39	REMOVE TERMINATOR		30F01690	
•		* .						30F01700	
0641 01	65000993	RT2A	LDX	Ll	RAREA			30F01710	
	6D0008C8		STX	Ll	READ	RESTORE READ ADDR		30F01720	
	0000866		XIO	L	RDRST	START READER		30F01730	
	4400084F		BSI	L	RTL	USE TIMING LOOP	sc	30F01740	
0649 0	7001		MDX		HOP1				
064A 0	7018	_	MDX		SKIP	LAST CARD RETURN		30F01760	
064E 0	4380	* HOP1	LDX	-	-80	LOAD XR 2	•	30F01770 30F01780	
	6280 C60009E3	nurı	LDX		RAREA+80	DATA READ		30F01780	
	4C20066E		BSC	L		BRANCH NOT BLANK		30F01800	
0650 0	7201		MDX		1	ADJ COL COUNT		30F01810	
0651 0	70FA		MDX	_	HOP1+1	750 00E 000N		30F01820	
		*						30F01830	
0652 01	OC0008CC		XIO	L	STACK	SELECT STACKER 2		30F01840	
0654 01	65000943		LDX	Ll	WAREA	WRITE AREA ADDR		30F01850	
	6D0008C4		STX	L1	PUNCH	PUNCH INSTRUCTION		30F01860	
	0C0008C2		XIO	L	PCHST	START 1130 PUNCH		30F01870	
	4400084F		851	L	RTL	USE TIMING LOOP	SC	30F01880	
065C 0	.7001		MDX		HOP2			30F01890	
065D 0	7005	_	MDX		SKIP	LAST CARD RETURN		30F01900	
0455 03	0000000	* HDP2	V T O		EDACO	EEED COMMAND		30F01910 30F01920	
	0C0008C0 4400084F	HUPZ	XIO BSI	L	FDACD RTL	FEED COMMAND USE TIMING LOOP	sc	30F01920 30F01930	
0662 0	70DE		MDX	_	RT2A	REPEAT CYCLE	30	30F01940	
0002 0	1000	*	HUX		NIZA	REFERI CICEE		30F01950	
0663 01	440007D7	SKIP	BSI	L	FDLCD	USE FEED LAST CARD	SC	30F01960	
	440007DC	•	BSI	ī	KNOW	CHECK BIT SWITCHES	SC	30F01970	
		*		_				30F01980	
0667 01	6500067B	SET3	LDX	Ll	RT3	RT ADDR		30F01990	
0669 0	6303		LDX		3	RT NUMBER		30F02000	
	44C00893		BSI	L	RTU	USE UPDATE RT	SC	30F02010	
066C 00	40800011		BSC	I	START	RETURN TO MONITOR	X	30F02020	
		*						30F02030	
0665 0	COCD	NTBLK			ONE	6FT 111 T 611 TO		30F02040	
U66F 01	EC0005DE		OR	L	TELL	SET HALT SWITCH		30F02050	
DATE	02JAN66	OIMAY	44					PROG ID	030F-4
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PART NO. 2191224 IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM PAGE 1442 READER/PUNCH FUNCTION TEST 30F02060 0671 01 D40005DE STO L TELL 30F02070 MESSAGE NUMBER 0673 0 6308 LDX 38 30F02080 0674 01 650008FF LDX L1 ALDBK LOAD BLANKS USE TYPE ROUTINE SC 30F02090 0676 01 44000830 BSI L TYPE 30F02100 0678 01 440007DC BSI KNOW CHECK BIT SWITCHES L 30F02110 067A 0 70C2 RT2 MDX 30F02120 30F02130 ************ 30F02140 30F02150 ROUTINE 3- READ 12 BITS/COL *** **** 30F02160 30F02170 30F02180 LDX L1 AMRDY MAKE READY 067B 01 6500090B RT3 30F02190 UPDATE MESSAGE 067D 01 6D00084E STX L1 MSG+1 30F02200 067F 01 650008EE LDX L1 ASTOH STK TO HOPPER 0681 0 6304 LDX 3 4 MESSAGE NUMBER 30F02210 0682 01 4400077D BSI L CKSTS CHECK 1442 STATUS SC 30F02220 30F02221 0684 01 C4000940 L WA40 LD 30F02222 REMOVE TERMINATOR 0686 01 D400096A STO L WAREA+39 30F02230 30F02240 0688 01 65000993 RT3A LDX L1 RAREA RESTORE READ ADDR 30F02250 068A 01 6D0008C8 STX L1 READ 30F02260 L RDRST START READER 0680 01 00000806 XIO 30F02270 DELAY LOOP SC 068E 01 4400084F BSI L RTL 30F02280 0690 0 700B MDX CHECK-1 SC SC 30F02290 0691 01 440007D7 BSI L FDLCD FEED LAST CARD 0693 01 440007DC BSI L KNOW CHECK BIT SWITCHES 30F02300 30F02310 SET4 RT ADDR 30F02320 0695 01 650006B9 LDX L1 RT4 30F02330 0697 0 6304 LDX 3 4 RT NUMBER SC 30F02340 0698 01 44000893 BSI L RTU USE UPDATE RT X 069A 00 4C800011 BSC I START RETURN TO MONITOR 30F02350 30F02360 30F02370 2 -80 LOAD XR 2 069C 0 62B0 IDX 30F02380 DATA PUNCHED 069D 01 C6000993 CHECK LD L2 WAREA+80 30F02390 069F 0 1803 REMOVE 3 BITS BSC L TERMR.E CK FOR TERMINATOR 30F02400 06A0 01 4C0406AC 30F02410 ADJ BACK 06A2 0 1003 SI A 30F02420 06A3 01 D40007D5 STO IN OUGHT TO BE L 028E STO 30F02430 06A5 01 F60009E3 EOR L2 RAREA+80 DATA READ 30F02440 06A7 01 44200784 BSI L ERRFD,Z BCH ON BITS 30F02450 ADJ COL COUNT 06A9 0 7201 MDX 2 1 06AA 0 70F2 30F02460 MDX CHECK CK NEXT COLUMN 30F02470 06AB 0 70DC MDX RT3A 30F02480 30F02490 30F02500 **** TERMINATOR FGUND ROUTINE ***** 30F02510 30F02520

REMOVE TERMINATOR

CLEAR ACC TO ZERO

STO IN DUGHT TO BE

ADJ BACK

DATA READ

ROUTINE 4- PUNCH 40 COLUMNS ***

CHANGE PCH DATA

BCH ON BITS

ADJ COL COUNT

DATE 02JAN66 01MAY66 EC NO. 415490 4154908

06AC 2 1801

06AD 0 1004

06AE 0 7001

06AF 0 1011

06B6 0 7201

06B7 0 70F7

0688 0 70CF

0680 01 D40007D5

06B2 01 F60009E3

06B4 01 44200784

06B9 01 C4000941

06BB 01 D400096A

TERMR SRA

XXX

RT4

SLA

MDX

SLA

STO

EOR

BSI

MDX

MDX

MDX

LD

STO L

XXX+1

L2 RAREA+80

L ERRFD.Z

XXX

L WA40A

WAREA+39

RT3A

17

L O2BE

2 1

PROG ID 030F-1

30F02530

30F02540

30F02550

30F02560 30F02570

30F02580

30F02590

30F02600

30F02610

30F02620

30F02630

30F02640 30F02650

30F02660

30F02670 30F02680 30F02690 30F02700

30F02710

SC

3

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1442 READER/PUNCH FUNCTION TEST

DATE EC NO.

02JAN66 415490

1442 READER/PUNCH FUNCTION TEST

02JAN66 U1MAY66 415490 415490B

EC NO.

*	LDX BSI L STX L XIO L BSI L MDX XIO L BSI L BSI L BSI L BSI L BSI L LDX BSI L LDX BSI L LDX BSI L BSC I	1 WAREA 1 PUNCH STACK PCHST RTL DUP STACK FDLCD KNOW 1 RT5 3 5 RTU START ***********************************	LOAD BLANKS MESSAGE NUMBER CHECK 1442 STATUS RESTORE PCH ADDR SELECT STACKER 2 START PUNCH USE TIMING LOOP SELECT STACKER 2 FEED LAST CARD CHECK BIT SWITCHES RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC SC SC X	30F02720 30F02730 30F02740 30F02750 30F02760 30F02770 30F02780 30F02810 30F02810 30F02810 30F02840 30F02850 30F02850 30F02880 30F02860 30F02860 30F02890 30F02910 30F02920 30F02920 30F02920 30F02920 30F02920 30F02920 30F02920 30F02920 30F02920 30F02920 30F02920 30F02920 30F02920 30F02920 30F02920
305 400077D \$5000943 DU008C4 C0008CC C0008C2 40008F OF5 C0008CC 40007D7 40007DC \$50006DA 305 4000893 C800011 \$### \$### \$### \$### \$### \$### \$### \$### \$#### \$#### \$########	LDX BSI L STX L XIO L BSI L MDX XIO L BSI L BSI L BSI L BSI L BSI L LDX BSI L LDX BSI L LDX BSI L BSC I	3 5 CKSTS 1 WAREA 1 PUNCH STACK PCHST RTL DUP STACK FDLCD KNOW 1 RT5 3 5 RTU START **********************************	MESSAGE NUMBER CHECK 1442 STATUS RESTORE PCH ADDR SELECT STACKER 2 START PUNCH USE TIMING LOOP SELECT STACKER 2 FEED LAST CARD CHECK BIT SWITCHES RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC SC SC X	30F02730 30F02740 30F02750 30F02770 30F02770 30F02780 30F02880 30F02810 30F02820 30F02830 30F02840 30F02850 30F02870 30F02880 30F02880 30F02990 30F02910 30F02910 30F02920 30F02930 30F02950 30F02950 30F02960 30F02970 30F02980 30F02980 30F02990 30F02990 30F02990 30F02990 30F02990 30F02990 30F02990 30F02990 30F02990 30F02990
\$5000943 DUI D0008C4 C0008CC C0008C2 40008CF C0008CC 40007D7 40007DC \$50006DA 305 4000893 C800011 \$################################	P LDX L STX L XIO L BSI L BSI L BSI L BSI L BSI L C L L L L L L L L L L L L L L L L L L	1 WAREA 1 PUNCH STACK PCHST RTL DUP STACK FDLCD KNOW 1 RT5 3 5 RTU START ***********************************	RESTORE PCH ADDR SELECT STACKER 2 START PUNCH USE TIMING LOOP SELECT STACKER 2 FEED LAST CARD CHECK BIT SWITCHES RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC SC SC X	30F02750 30F02760 30F02770 30F02780 30F02890 30F02810 30F02820 30F02840 30F02840 30F02840 30F02860 30F02870 30F02890 30F02990 30F02910 30F02920 30F02930 30F02940 30F02940 30F02940 30F02940 30F02940 30F02940 30F02950 30F02960 30F02970 30F02980 30F02980 30F02990 30F02990 30F02990 30F02900 30F02900
5000943 DUI 00008C4 C0008C2 400084F 0F5 C0008CC 40007D7 40007DC \$50006DA 305 4000893 C800011 \$################################	STX L XIO L XIO L BSI L BSI L BSI L BSI L BSI L BSI L CONTROL BSI L BSI L BSI L CONTROL BSI L BSI L BSI L CONTROL BSI L BSI L CONTROL BSI L CO	1 PUNCH STACK PCHST RTL DUP STACK FDLCD KNOW 1 RT5 3 5 RTU START **********************************	SELECT STACKER 2 START PUNCH USE TIMING LODP SELECT STACKER 2 FEED LAST CARD CHECK BIT SWITCHES RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC SC SC X	30F02760 30F02770 30F02780 30F02800 30F02810 30F02810 30F02830 30F02840 30F02850 30F02860 30F02870 30F02870 30F02870 30F02970 30F02930 30F02930 30F02930 30F02930 30F02930 30F02930 30F02930 30F02950 30F02970 30F02980 30F02980 30F02990 30F02990 30F02990 30F02990 30F02990
D0008C4 C0008CC C0008C2 400084F 0F5 C0008CC 40007D7 40007DC \$50006DA 305 4000893 C800011 \$################################	STX L XIO L XIO L BSI L BSI L BSI L BSI L BSI L BSI L CONTROL BSI L BSI L BSI L CONTROL BSI L BSI L BSI L CONTROL BSI L BSI L CONTROL BSI L CO	1 PUNCH STACK PCHST RTL DUP STACK FDLCD KNOW 1 RT5 3 5 RTU START **********************************	SELECT STACKER 2 START PUNCH USE TIMING LODP SELECT STACKER 2 FEED LAST CARD CHECK BIT SWITCHES RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC SC SC X	30F02770 30F02780 30F02810 30F02810 30F02820 30F02830 30F02840 30F02850 30F02870 30F02870 30F02870 30F02890 30F02910 30F02920 30F02930 30F02930 30F02930 30F02930 30F02970 30F02980 30F02980 30F02980 30F02980 30F02990 30F02990 30F02990 30F02990
C0008CC C0008C2 400084F OF5 C0008CC 40007D7 40007DC * 50006DA 305 4000893 C800011 * **** * * 500090B D00084E 50008EE 304 400077D * 5000993 RTS	XIO L XIO L BSI L BSI L BSI L BSI L BSI L BSI L BSI L CS LDX L CS LDX L CS LDX L CS LDX L CS LDX L CS LDX L CS LDX L CS LDX L CS LDX L CS LDX L CS LDX L CS LDX L CS L CS LDX L CS L CS L CS L CS L CS L CS L CS L CS	STACK PCHST RTL DUP STACK FDLCD KNOW 1 RT5 3 5 RTU START ***********************************	SELECT STACKER 2 START PUNCH USE TIMING LODP SELECT STACKER 2 FEED LAST CARD CHECK BIT SWITCHES RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC SC SC X	30F02780 30F02790 30F02810 30F02820 30F02820 30F02830 30F02840 30F02850 30F02870 30F02880 30F02880 30F02990 30F02910 30F02910 30F02920 30F02930 30F02950 30F02950 30F02950 30F02970 30F02970 30F02980 30F02990 30F02990 30F02990 30F02990 30F02990 30F02990
C0008C2 400084F OF5 C0008CC 40007D7 40007DC 50006DA 305 4000893 C800011 **** *** *** \$500090B D00084E 50008EE 304 400077D *5000993 RTS	XIO L BSI L MDX XIO L BSI L BSI L LDX BSI L BSC I ***********************************	PCHST RTL DUP STACK FDLCD KNOW 1 RT5 3 5 RTU START **********************************	START PUNCH USE TIMING LOOP SELECT STACKER 2 FEED LAST CARD CHECK BIT SWITCHES RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC SC SC X	30F02790 30F02810 30F02810 30F02820 30F02830 30F02840 30F02850 30F02860 30F02870 30F02880 30F02990 30F02910 30F02910 30F02920 30F02930 30F02940 30F02940 30F02940 30F02970 30F02980 30F02990 30F02990 30F02990 30F03010
400084F 0F5 C0008CC 40007D7 40007DC 50006DA 305 4000893 C800011 *** ** ** ** 500090B D00084E 50008EE 304 400077D \$5000993 D0008C8	BSI L MDX XIO L BSI L BSI L LDX BSI L BSC I ***********************************	RTL DUP STACK FDLCD KNOW 1 RT5 3 5 RTU START **********************************	USE TIMING LOOP SELECT STACKER 2 FEED LAST CARD CHECK BIT SWITCHES RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC SC X	30F02800 30F02810 30F02830 30F02840 30F02850 30F02860 30F02870 30F02890 30F02990 30F02910 30F02920 30F02940 30F02940 30F02940 30F02940 30F02980 30F02980 30F02990 30F02990 30F02990 30F02990
0F5 C0008CC 40007D7 40007DC ** 50006DA SE: 305 4000893 C800011 ** *** * * * * * * * * * * * * * * *	MDX XIO L BSI L BSI L LDX BSI L BSC I ***********************************	DUP STACK FDLCD KNOW 1 RT5 3 5 RTU START **********************************	SELECT STACKER 2 FEED LAST CARD CHECK BIT SWITCHES RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC SC X	30F02810 30F02820 30F02840 30F02850 30F02860 30F02870 30F02880 30F02900 30F02910 30F02920 30F02930 30F02930 30F02950 30F02950 30F02960 30F02970 30F02980 30F02990 30F02990 30F03010
C0008CC 40007D7 40007DC ** 50006DA SE' 305 4000893 C800011 ** *** ** 5000908 RT' 5000908 RT' 50008EE 304 400077D ** 5000993 RT' 500098C8	XIO L BSI L BSI L LDX BSI L BSC I STX L LDX LDX BSI L CSA LDX L XIO L	STACK FDLCD KNOW 1 RT5 3 5 RTU START **********************************	FEED LAST CARD CHECK BIT SWITCHES RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC X	30F02820 30F02840 30F02850 30F02860 30F02870 30F02880 30F02890 30F02900 30F02910 30F02920 30F02930 30F02950 30F02950 30F02960 30F02970 30F02980 30F02990 30F02990 30F02990 30F02990 30F03000
40007D7 40007DC \$50006DA 5000893 C800011 **** \$500090B D00084E 50008EE 304 400077D \$5000993 D0008C8	BSI L BSI L LDX L LDX BSI L BSC I ***********************************	FDLCD KNOW 1 RT5 3 5 RTU START ************** ROUTINE 5- 1 AMRDY 1 MSG+1 1 ASTOH 3 4 CKSTS 1 RAKEA 1 READ	FEED LAST CARD CHECK BIT SWITCHES RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC X	30F02830 30F02840 30F02850 30F02870 30F02870 30F02880 30F02990 30F02910 30F02920 30F02930 30F02930 30F02950 30F02970 30F02980 30F02980 30F02990 30F02990 30F03010
#500090B RTS 500090B RTS 500090B RTS 500090B RTS 500090B RTS 500090B RTS 500090B RTS 600090B BSI L LDX L LDX BSI L BSC I *********** 5 LDX L STX L LDX BSI L CAN BSI L SA LDX L XIO L	KNOW 1 RT5 3 5 RTU START **********************************	CHECK BIT SWITCHES RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC X	30F02840 30F02850 30F02860 30F02870 30F02880 30F02990 30F02910 30F02920 30F02930 30F02940 30F02950 30F02960 30F02970 30F02980 30F02990 30F02990 30F02990 30F03010	
50006DA SE3 305 4000893 C800011 *** ** 500090B D00084E 50008EE 304 400077D \$5000993 RTS	BSI L STX L LDX BSI L STX L LDX BSI L STX L LDX BSI L STX L LDX BSI L STX L LDX BSI L STX L LDX BSI L	1 RT5 3 5 RTU START **********************************	RT ADDR RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	SC X	30F02850 30F02860 30F02860 30F02880 30F02990 30F02910 30F02920 30F02930 30F02940 30F02940 30F02960 30F02970 30F02980 30F02990 30F02990 30F03010
305 4000893 C800011 **** *** 5000908 B00084E 50008EE 304 400077D *5000993 RTS	LDX BSI L BSC I	3 5 RTU START **********************************	RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	E	30F02860 30F02870 30F02880 30F02990 30F02910 30F02910 30F02930 30F02940 30F02950 30F02960 30F02970 30F02980 30F02990 30F03000
305 4000893 C800011 **** *** 5000908 B00084E 50008EE 304 400077D *5000993 RTS	LDX BSI L BSC I	3 5 RTU START **********************************	RT NUMBER UPDATE ROUTINE RETURN TO MONITOR ***********************************	E	30F02870 30F02880 30F02890 30F02910 30F02920 30F02930 30F02940 30F02950 30F02960 30F02970 30F02980 30F02990 30F02990 30F03010
4000893 C800011 **** *** 5000908 RT! D00084E 50008EE 304 400077D *5000993 RT!	BSI L BSC I STA L LDX L LDX L LDX BSI L SA LDX L XIO L	RTU START ***********************************	UPDATE ROUTINE RETURN TO MONITOR ***********************************	E	30F02880 30F02890 30F02910 30F02920 30F02920 30F02940 30F02950 30F02960 30F02970 30F02980 30F02980 30F02990 30F03000
C800011 ** ** * 5000908 RT: D00084E 50008E 304 400077D * 5000993 RT: D0008C8	BSC I ****** 5 LDX L STX L LDX L LDX BSI L 5A LDX L STX L X10 L	START **********************************	RETURN TO MONITOR ***********************************	E	30F02890 30F02900 30F02910 30F02920 30F02930 30F02940 30F02950 30F02960 30F02970 30F02980 30F02990 30F03000 30F03010
* * * * * * * * * * * * * * * * * * *	5 LDX L STX L LDX L LDX BSI L SA LDX L STX L XIO L	ROUTINE 5- AMRDY MSG+1 ASTOH CKSTS RAREA READ	MAKE READY UPDATE MESSAGE STK TO HOPPER MESSAGE NUMBER CHECK 1442 STATUS	E	30F02900 30F02910 30F02920 30F02930 30F02940 30F02950 30F02970 30F02970 30F02990 30F03000 30F03010
**** 5000908 RT! 500084E 50008EE 304 400077D * 5000993 RT! D0008C8	5 LDX L STX L LDX L LDX BSI L SA LDX L STX L XIO L	ROUTINE 5- 1 AMRDY 1 MSG+1 1 ASTOH 3 4 CKSTS 1 RAREA 1 READ	- RD AND PCH ******** MAKE READY UPDATE MESSAGE STK TO HOPPER MESSAGE NUMBER CHECK 1442 STATUS		30F02910 30F02920 30F02930 30F02940 30F02950 30F02960 30F02970 30F02980 30F02990 30F03000 30F03010
**: \$ * 5000908 RT! 000084E 50008EE 304 400077D \$ * 5000993 RT! 00008C8	5 LDX L STX L LDX L LDX BSI L SA LDX L STX L XIO L	1 AMRDY 1 MSG+1 1 ASTOH 3 4 CKSTS 1 RAREA 1 READ	MAKE READY UPDATE MESSAGE STK TO HOPPER MESSAGE NUMBER CHECK 1442 STATUS		30F02930 30F02940 30F02950 30F02960 30F02970 30F02980 30F02980 30F03000 30F03010
5000908 RTS 000084E 50008EE 304 400077D \$ 5000993 RTS 00008C8	5 LDX L STX L LDX L LDX BSI L SA LDX L STX L XIO L	1 AMRDY 1 MSG+1 1 ASTOH 3 4 CKSTS 1 RAREA 1 READ	MAKE READY UPDATE MESSAGE STK TO HOPPER MESSAGE NUMBER CHECK 1442 STATUS		30F02940 30F02950 30F02960 30F02970 30F02980 30F02990 30F03000 30F03010
5000908 RTS D00084E 50008EE 304 400077D * 5000993 RTS	STX L LDX L LDX BSI L SA LDX L STX L XIO L	1 MSG+1 1 ASTOH 3 4 CKSTS 1 RAREA 1 READ	UPDATE MESSAGE STK TO HOPPER MESSAGE NUMBER CHECK 1442 STATUS		30F02950 30F02960 30F02970 30F02980 30F02990 30F03000 30F03010
500090B RTS D00084E 50008EE 304 400077D * 5000993 RTS D0008C8	STX L LDX L LDX BSI L SA LDX L STX L XIO L	1 MSG+1 1 ASTOH 3 4 CKSTS 1 RAREA 1 READ	UPDATE MESSAGE STK TO HOPPER MESSAGE NUMBER CHECK 1442 STATUS		30F02960 30F02970 30F02980 30F02990 30F03000 30F03010
D00084E 50008EE 304 400077D \$5000993 RT!	STX L LDX L LDX BSI L SA LDX L STX L XIO L	1 MSG+1 1 ASTOH 3 4 CKSTS 1 RAREA 1 READ	UPDATE MESSAGE STK TO HOPPER MESSAGE NUMBER CHECK 1442 STATUS		30F02970 30F02980 30F02990 30F03000 30F03010
50008EE 304 400077D \$ 5000993 RT! D0008C8	LDX L LDX BSI L SA LDX L STX L XIO L	1 ASTOH 3 4 CKSTS 1 RAREA 1 READ	STK TO HOPPER MESSAGE NUMBER CHECK 1442 STATUS	sc	30F02980 30F02990 30F03000 30F03010
304 400077D * 5000993 RT! D0008C8	LDX BSI L SA LDX L STX L XIO L	3 4 CKSTS 1 RAREA 1 READ	MESSAGE NUMBER CHECK 1442 STATUS	sc	30F02990 30F03000 30F03010
400077D \$5000993 RT! D0008C8	BSI L 5A LDX L STX L XIO L	CKSTS 1 RAREA 1 READ	CHECK 1442 STATUS	sc	30F03000 30F03010
\$5000993 RT:	SA LDX L STX L XIO L	1 RAREA 1 READ		36	30F03010
5000993 RT: 00008C8	STX L XIO L	1 READ	0.0000000000000000000000000000000000000		
D0008C8	STX L XIO L	1 READ	DCCTOOC DC40 4000		
	XIO L				30F03030
			START RDR		30F03040
400084F	BSI L		USE TIMING LOOP	SC	30F03050
008	MDX	NEXT	032 11.11.10 200.		30F03060
40007D7	BSI L		FEED LAST CARD	SC	30F03070
40007DC	BSI L	KNOW	CK BIT SW SETTINGS	SC	30F03080
					30F03090
500072F SET	6 LDX L	1 RT6	RT ADDR		30F03100
306		3 6	RT NUMBER		30F03110
4000893	BSI L		USE UPDATE RT	SC	30F03120
C800011	BSC I	START	RETURN TO MONITOR	X	30F03130
*			1010 40 3		30F03140
2D8 NEX	-	2 -40	LOAD XR 2 Data Punched		30F03150 30F03160
.600096B CDI 803	1P LD L: Sra	2 WAREA+40 3	REMOVE 3 BITS		30F03170
C040707	BSC L	-	CK FOR TERMINATOR		30F03170
003	SLA	3	ADJ BACK		30F03190
40007D5	STO L		STO IN OUGHT TO BE		30F03200
60009BB		2 RAREA+40			30F03210
4200784	BSI L		BCH ON BITS	SC	30F03220
201	MDX	2 1	ADJ COL COUNT		30F03230
0F2	MDX	COMP			30F03240
018	MDX	NOW			30F03250
*		_			30F03260
		1			30F03270
004			ADJ BACK		30F03280
	MDX	XXXX+1			30F03290
001	VV CIA	17	CLEAR ACC TO TERO		30F03300 30F03310
001					30F03310
001 # 011 XX					30F03330
001 011 XX 40007D5				SC	30F03340
001 011		-			30F03350
001 ** 011 XX; 40007D5 60009B8 4200784		XXXX .			30F03360
001 011	MDX		LOAD XR 3		30F03370
001 ** 011	MDX		1040 VD 3		30F03380
001	MDX LDX	2 -40	LUAU XK Z		30F03390
8	018 #01 CH: 004 001 * 011 XXI 00007D5 0000988	# MDX # MDX # MDX # SLA MDX	# MDX NOW #	# MDX NOW # CHIP SRA 1 REMOVE TERMINATOR # ADJ BACK # ADJ COL COUNT # ADJ COL COUNT # ADJ COL COUNT # ADJ BACK # ADJ COL COUNT # ADJ COL COUNT # ADJ BACK # ADJ COL COUNT # ADJ COL COUNT # ADJ BACK	# MDX NOW # REMOVE TERMINATOR ROLL

				•						
715	01	C60009BB	FLIP	LD	L2	RAREA+40	DATA READ		30F03400	
		D70009E4				RARFA+81	NEW LOCATION		30F03410	
719	0	73FF		MDX			ADJ XR 3		30F03420	
71A		7201		MDX	2		ADJ XR 2		30F03430	
718	0	70F9		MDX		FLIP			30F03440	
	_		•		-	40	1040 VB 3		30F03450 30F03460	
71C		62D8		LDX SLA	2		LOAD XR 2 Clear ACC		30F03470	
710	01	1011 D60009BB	CLEAR		12		CLEAR COL 1 TO 40		30F03480	
720		7201	CLLAN	MOX		1			30F03490	
0721		70FC		MDX	_	CLEAR			30F03500	
							•		30F03510	
		C4000942	NOM	LD	L				30F03520	
		D40009E2		STO			SET TERM FOR PCH		30F03530 30F03540	
		65000993		LDX		RAREA PUNCH	SET PCH ADDR		30F035 5 0	
7728	01	6D0008C4		STX			START PUNCH		30F03560	
7726	01	0C0008C2 4400084F		BSI	ī		USE TIMING LOOP	sc	30F03570	
72E	0	70B4		MDX	-	RT5A			30F03580	
	•		*	_					30F03590	
			****	***	***	*******	********		30F03600	
			*						30F03610	
			****			ROUTINE 6-	PUNCH 80 COLUMNS ***		30F03620	
			*						30F03630 30F03640	
772	01	65000904	RT6	LDX	. 1	ABLK	BLANKS MAKE READY	E	30F03650	
		6D00084E	KIO	STX		MSG+1	DEANNS HAKE KEAD!	•	30F03660	
7733	01	650008CE		LDX			ANY PATTERN PLUS		30F03670	
		6301		LDX	3		MESSAGE NUMBER		30F03680	
0736	0	4046		BSI		CKSTS	CHECK 1442 STATUS		30F03690	
		65000993			Ll	RAREA			30F03700	
		6D0008C8		STX	LI	READ	RESTORE RD ADDR START READER USE TIMING LOOP LAST COL DATA SET TERMINATOR REPLACE DATA FEED LAST CARD		30F03710	
		0000866		XIO	Ļ	RDRSI	START READER		30F03720 30F03730	
		4400084F C40009E2		BSI LD	Ļ	DADE AA70	LAST COL DATA	36	30F03740	
		EC000766		OR	ī	RITI2	SET TERMINATOR		30F03750	
		D40009E2		STO	ī	RAREA+79	REPLACE DATA		30F03760	
_		440007D7		BSI	Ľ.	FDLCD	FEED LAST CARD	SC	30F03770	
			•						30F03160	
0747	01	65000993	RECK			RAREA			30F03790	
		6D0008C4		STX		PUNCH	RESTORE PCH ADDR			
	-	00000800		XIO	Ļ		SELECT STACKER 2 START PUNCH		30F03810 30F03820	
		0C0008C2 4400084F		XIO BSI	L	_	START PUNCH	S.C	30F03830	
0751		70F5		MDX	•	RECK	REPEAT NO LAST CARD	30	30F03840	
		00000800		XIO	L		SELECT STACKER 2		30F03850	
		440007D7	•	BSI			USE TIMING LOOP REPEAT NO LAST CARD SELECT STACKER 2 FEED DATA CARD	SC	30F03860	
			*						30503870	
		440007DC	RTEND		-	KNOW	CHECK BIT SWITCHES	SC	30F03880	
		0C0008CA		XIO	L	2FN2F	2FM2F D2M		30F03890	
		1003		SLA BSC	L	3 RTED	CHECK FOR LAST CARD BR IF NOT LAST CARD		30F03900 30F03905	
		4C100763 67000756		LDX	_	RTEND	LOOP THRU MONITOR		30F03910	
		6F0005E4		STX		MLSCF	UNTIL LAST CARD		30F03915	
		4C800011		BSC	ī	START	GDES OFF		30F03920	
			*						30F03925	
		44800015	RTED	9S I	1	END	TERMINATE PROG		30F03930	
0765	1 .	05DC		DC		PST			30F03940	
			*						30F03950	
			*	***	***		**********		30F03970 30F03980	
			*	- 	~ ~ ~ .	· · · · · · · · · · · · · · · · · · ·			30F03990	
			****			STORAGE ARE	EA *********		30F04000	
			•						30F04010	
			*						30F04020	
0766		0008	BIT12			/0008	BIT 12		30F04030	
0767	-	8003	CNTLO			/8003	RDR COL REQ		30F04040	
0768	O	4003	CNTL1	DC .		/4003	PCH COL REQ		30F04050	

1442 READER/PUNCH FUNCTION TEST

1442 READER/PUNCH FUNCTION TEST

0769 0	0800	CNTL4	DC		/0800	OP COMPLETE		30F04060
076A 0	0000	CONST			/0000	TIMING COUNT		3CF04070
076B 0	C000	COUNT			/0000	SHIFT COUNT		30F04080
0762 0	0000	EXTRA			/0000	ROUTINE STORAGE		30F04090
076D 0	0000	SAVE	DC		/0000	ERROR BITS		30F04100
076E 0		SAVE	DC		/8000	BIT O		30F04110
	8000							
076F 0	0000	STG	DC		/0000	ROUTINE ADDR STG		30F04120
0770 0	7007	SWA	MDX	X	IRECD-SW1-			30F04130
0771 0	1000	SWB	DC		/1000	NO OP		30F04140
0772 0	7006	SWJ	MDX	X		EQUAL VALUE OF BCH		30F04150
0773 0	70F7	SWL	MDX	X	RTLA-SW1-1	EQUAL VALUE OF BCH	PR01	30F04160
0774 0	0000	XERR	DC		/0000	EKTRA ERROR		30F04170
		*						30F04180
		****	****	****	*******	*************		30F04190
		*						30F04200
		****			COMMON USE	ROUTINES ********		30F04210
		*						30F04220
		*						30F04230
		****			BUSY POUTT	VE **********		30F04240
		*			003. K00.1.			30F04250
		*						30F04260
					_			
0775 0	0000	BUSY	DC		0		SE	30F04270
	650008DF		LDX		ABUSY	BUSY		30F04280
0778 0	6302		LDX		2	MESSAGE NUMBER		30F04290
0779 01	4400083 0		BSI	L	TYPE	USE TYPE RT	SC	30F04300
077B 01	40800775		BSC	I	BUSY	RETURN TO PROG	SX	30F04310
		*						30F04320
		*						30F04330
		****			CHECK STATE	US ROUTINE *******		30F04340
		*						30F04350
								30F04360
077D 0	0000	CKSTS	מכ		/0000		SE	30F04370
	44000830	CKSIS	BSI	L	TYPE	USE TYPE RT	SC	30F04380
				Ĺ		USE SENSE RT	SC	30F04390
	4400089C		BSI		SENSB			
0782 01	4C80077D		BSC	I	CKSTS	RETURN TO PROGRAM	SX	30F04400
		*						30F04410
		*						30F04420
		****			ERROR FOUNI	D ROUTINE ********		30F04430
		*						30F04440
		*						30F04450
0784 0	0000	ERRFD	DC		/0000	ADDR STG	SE	30F04460
	E 0 / E		EOD		O2BE	ERROR AS FOUND		30F04470
0785 0	F04F		EOR		0200	EMMON AS TOOMS		30104410
0785 0 0786 0	F04F D04D		STO		WAS	STORE FOR TYPING		30F04480
		•						
0786 0	DO4D	*		2				30F04480
0786 0 0787 0	7251	* KEEP1	S.TO MDX	5	WAS +81			30F04480 30F04490
0786 0 0787 0 0788 0	7251 1000		STO MDX SLA	_	WAS +81 0	STORE FOR TYPING MDX WILL SKIP THIS		30F04480 30F04490 30F04500 30F04510
0786 0 0787 0 0788 0 0789 0	7251 1000 6A4C		MDX SLA STX	2	WAS +81 0 COL	STORE FOR TYPING MDX WILL SKIP THIS STO COL COUNT		30F04480 30F04490 30F04500 30F04510 30F04520
0786 0 0787 0 0788 0 0789 0 078A 0	7251 1000 6A4C 72AF	KEEP1	MDX SLA STX MDX	2	WAS +81 0 COL -81	STORE FOR TYPING MDX WILL SKIP THIS STO COL COUNT CORRECT XR2		30F04480 30F04490 30F04500 30F04510 30F04520 30F04530
0786 0 0787 0 0788 0 0789 0	7251 1000 6A4C	KEEP1	MDX SLA STX MDX	2	WAS +81 0 COL	STORE FOR TYPING MDX WILL SKIP THIS STO COL COUNT		30F04480 30F04490 30F04500 30F04510 30F04520 30F04530 30F04540
0786 0 0787 0 0788 0 0789 0 078A 0 078B 0	7251 1000 6A4C 72AF 1000	KEEP1	MDX SLA STX MDX SLA	2	#81 0 COL -81	MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS		30F04480 30F04490 30F04500 30F04510 30F04520 30F04530 30F04540 30F04550
0786 0 0787 0 0788 0 0789 0 078A 0 078B 0	7251 1000 6A4C 72AF 1000	KEEP1	MDX SLA STX MDX SLA STX	2 2 L2	WAS +81 0 COL -81 0 SENSE	MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2		30F04480 30F04490 30F04500 30F04510 30F04520 30F04530 30F04550 30F04560
0786 0 0787 0 0788 0 0789 0 078A 0 078B 0	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC	KEEP1	MDX SLA STX MDX SLA STX STX	2 2 L2 L3	WAS +81 0 COL -81 0 SENSE STACK	MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3		30F04480 30F04490 30F04500 30F04510 30F04520 30F04530 30F04540 30F04550 30F04560 30F04570
0786 0 0787 0 0788 0 0789 0 078A 0 078B 0 078C 01 078E 01 0790 01	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929	KEEP1	MDX SLA STX MDX SLA STX STX LDX	2 2 L2 L3 L3	WAS +81 0 COL -81 0 SENSE STACK ACOL	MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2		30F04480 30F04490 30F04510 30F04510 30F04520 30F04530 30F04540 30F04560 30F04570 30F04570
0786 0 0787 0 0788 0 0789 0 0788 0 0788 0 078C 01 078C 01 079C 01	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40	KEEP1	MDX SLA STX MDX SLA STX STX LDX STX	2 2 L2 L3 L3	WAS +81 O COL -81 O SENSE STACK ACOL AMSG+1	STORE FOR TYPING MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG— COLUMN		30F04480 30F04490 30F04510 30F04510 30F04520 30F04530 30F04540 30F04550 30F04560 30F04560 30F04570 30F04580
0786 0 0787 0 0788 0 0789 0 078A 0 078B 0 078C 01 078C 01 079C 01 0792 0	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103	KEEP1	MDX SLA STX MDX SLA STX LDX STX LDX STX LDX	2 2 L2 L3 L3	WAS +81 O CDL -81 O SENSE STACK ACOL AMSG+1 3	MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG— COLUMN NUMBER OF MODIFIERS		30F04480 30F04490 30F04510 30F04510 30F04520 30F04530 30F04550 30F04550 30F04570 30F04580 30F04590 30F04590
0786 0 0787 0 0788 0 0789 0 0788 0 0786 01 0786 01 0790 01 0792 0 0793 0	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103 6209	KEEP1	MDX SLA STX MDX SLA STX LDX STX LDX LDX LDX	2 2 L2 L3 L3 2	WAS +81 O COL -81 O SENSE STACK ACOL AMSG+1 3 9	MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG- COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER		30F04480 30F04490 30F04500 30F04520 30F04530 30F04540 30F04550 30F04560 30F04570 30F04590 30F04590 30F04610
0786 0 0787 0 0788 0 0789 0 0788 0 0786 01 0786 01 0790 01 0792 0 0793 0	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103	KEEP1	MDX SLA STX MDX SLA STX LDX STX LDX STX LDX	2 2 L2 L3 L3 2	WAS +81 O CDL -81 O SENSE STACK ACOL AMSG+1 3	MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG— COLUMN NUMBER OF MODIFIERS		30F04480 30F04490 30F04510 30F04510 30F04520 30F04530 30F04550 30F04550 30F04570 30F04580 30F04590 30F04590
0786 0 0787 0 0788 0 0789 0 0788 0 0786 01 0786 01 0790 01 0792 0 0793 0	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103 6209	KEEP1	MDX SLA STX MDX SLA STX LDX STX LDX LDX LDX	2 2 L2 L3 L3 2	WAS +81 O COL -81 O SENSE STACK ACOL AMSG+1 3 9	STORE FOR TYPING MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG— COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER ALPHA MESSAGE ERROR TYPE OUT	sc	30F04480 30F04490 30F04510 30F04510 30F04520 30F04530 30F04560 30F04560 30F04570 30F04580 30F04590 30F04600 30F04600 30F04620 30F04630
0786 0 0787 0 0788 0 0789 0 0788 0 0788 0 0788 0 0786 01 0790 01 0792 0 0793 0 0794 0 0797 0	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103 6209 6700091E	KEEP1	MDX SLA STX MDX SLA STX LDX LDX LDX LDX LDX	2 2 L3 L3 1 2 L3	WAS +81 O COL -81 O SENSE STACK ACOL AMSG+1 3 9 AWASB	MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG- COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER ALPHA MESSAGE		30F04480 30F04490 30F04510 30F04520 30F04530 30F04550 30F04560 30F04570 30F04570 30F04580 30F04600 30F04610 30F04620
0786 0 0787 0 0788 0 0789 0 0788 0 0788 0 0786 01 0790 01 0792 0 0793 0 0794 0 0795 01 0797 0	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103 6209 6700091E 401B	KEEP1	MDX SLA STX MDX SLA STX LDX STX LDX LDX LDX LDX LDX BSI	2 2 L3 L3 L3 1 2 L3	WAS +81 0 COL -81 0 SENSE STACK ACOL AMSG+1 3 9 AWASB ETYPE	STORE FOR TYPING MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG— COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER ALPHA MESSAGE ERROR TYPE OUT		30F04480 30F04490 30F04510 30F04510 30F04520 30F04530 30F04560 30F04560 30F04570 30F04580 30F04590 30F04600 30F04600 30F04620 30F04630
0786 0 0787 0 0788 0 0789 0 0788 0 0788 0 0786 01 0790 01 0792 0 0793 0 0794 0 0795 01 0797 0 0798 01	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103 6209 6700091E 401B 678008CC 668008CA	KEEP1	MDX SLA STX MDX SLA STX LDX STX LDX LDX LDX LDX BSI LDX	2 2 L3 L3 L3 1 2 L3	WAS +81 O COL -81 O SENSE STACK ACOL AMSG+1 3 9 AWASB ETYPE STACK	STORE FOR TYPING MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG- COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER ALPHA MESSAGE ERROR TYPE OUT RESTORE XR3		30F04480 30F04490 30F04510 30F04510 30F04520 30F04550 30F04560 30F04560 30F04570 30F04570 30F04590 30F04600 30F04620 30F04620 30F04640
0786 0 0787 0 0788 0 0789 0 0788 0 0786 01 0796 01 0792 0 0793 0 0794 0 0795 01 0797 01 0798 01 0799 01	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103 6209 6700091E 401B 678008CC 668008CA 74020784	KEEP1	MDX SLA STX SLA STX LDX LDX LDX LDX LDX LDX LDX LDX MDX	2 L2 L3 L3 1 2 L3 I3 I2 L3	WAS +81 O COL -81 O SENSE STACK ACOL AMSG+1 3 9 AWASB ETYPE STACK SENSE ERRED, 2	MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG— COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER ALPHA MESSAGE ERROR TYPE OUT RESTORE XR3 RESTORE XR2 ADD 2 TO RETURN ADDR		30F04480 30F04490 30F04510 30F04510 30F04520 30F04530 30F04550 30F04550 30F04570 30F04570 30F04580 30F04600 30F04620 30F04620 30F04620 30F04650
0786 0 0787 0 0788 0 0789 0 0788 0 0786 01 0786 01 0790 01 0793 0 0794 0 0795 01 0797 0 0798 01 0796 01	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103 6209 6700091E 401B 678008CC 668008CA 74020784 0C0008CC	KEEP1	MDX SLA STX SLA STX STX LDX LDX LDX BSI LDX MDX XIO	2 L2 L3 L3 1 2 L3 I3 I2 L3	WAS +81 O COL -81 O SENSE STACK ACOL AMSG+1 3 9 AWASB ETYPE STACK SENSE ERRED,2 STACK	MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG- COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER ALPHA MESSAGE ERROR TYPE OUT RESTORE XR3 RESTORE XR2 ADD 2 TO RETURN ADDR SELECT ERROR CARD		30F04480 30F04490 30F04520 30F04520 30F04530 30F04550 30F04550 30F04570 30F04570 30F04580 30F04580 30F04600 30F04600 30F04630 30F04660 30F04650 30F04660 30F04660 30F04660
0786 0 0787 0 0788 0 0789 0 0788 0 0788 0 0788 0 0790 01 0792 0 0794 0 0795 01 0797 0 0798 01 0796 01 0796 01 0796 01	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103 6209 6700091E 401B 678008CC 668008CA 74020784 0C0008CC C40005DE	KEEP1	MDX SLA STX MDX SLA STX LDX LDX LDX LDX LDX LDX LDX LDX LDX LD	2 L2 L3 L3 1 2 L3 I3 I2 L3	WAS +81 O COL -81 O SENSE STACK ACOL AMSG+1 3 9 AWASB ETYPE STACK SENSE ERRED,2 STACK TELL	STORE FOR TYPING MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG- COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER ALPHA MESSAGE ERROR TYPE OUT RESTORE XR3 RESTORE XR3 RESTORE XR2 ADD 2 TO RETURN ADDR SELECT ERROR CARD BIT SWITCH STG		30F04480 30F04490 30F04510 30F04510 30F04520 30F04530 30F04550 30F04560 30F04570 30F04580 30F04590 30F04601 30F04620 30F04630 30F04640 30F04660 30F04660 30F04660 30F04660 30F04660
0786 0 0787 0 0788 0 0789 0 0788 0 0788 0 0788 0 0790 01 0792 0 0793 0 0794 0 0795 01 0797 0 0798 01 0796 01 0796 01 0796 01	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103 6209 6700091E 401B 678008CC 668008CA 74020784 0C0008CC C40005DE	KEEP1	MDX SLA STX SLA STX LDX LDX LDX LDX LDX MDX LDX MDX SLD LDX MDX SLA	2 2 2 L3 L3 3 1 2 L3 L3 L5 L L L	WAS +81 O COL -81 O SENSE STACK ACOL AMSG+1 3 9 AWASB ETYPE STACK SENSE ERRFD,2 STACK TELL 9	STORE FOR TYPING MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG— COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER ALPHA MESSAGE ERROR TYPE OUT RESTORE XR3 RESTORE XR2 ADD 2 TO RETURN ADDR SELECT ERROR CARD BIT SWITCH STG CK BIT 9 TYPE ALL ER	sc	30F04480 30F04490 30F04510 30F04510 30F04520 30F04530 30F04560 30F04560 30F04560 30F04570 30F04680 30F04620 30F04620 30F04630 30F04660 30F04660 30F04660 30F04660 30F04660 30F04660 30F04660 30F04660
0786 0 0787 0 0788 0 0789 0 0788 0 0788 0 0788 0 0790 01 0792 0 0793 0 0794 0 0795 0 0797 0 0796 01 0796 01 0796 01 0796 01 0790 01 0790 01	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103 6209 6700091E 401B 678008CC 668008CA 74020784 0C0008CC C40005DE 1009 4C900784	KEEP1	MDX SLA STX SLA STX LDX LDX LDX LDX LDX MDX XIO LDX MDX SLA SSC	2 2 2 L3 L3 3 1 2 L3 L3 L2 L L L L	WAS +81 O COL -81 O SENSE STACK ACOL AMSG+1 3 9 AWASB ETYPE STACK SENSE ERRFD,2 STACK TELL 9 ERRFD,-	STORE FOR TYPING MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG- COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER ALPHA MESSAGE ERROR TYPE OUT RESTORE XR3 RESTORE XR2 ADD 2 TO RETURN ADDR SELECT ERROR CARD BIT SWITCH STG CK BIT 9 TYPE ALL ER BCH PLUS OR ZERO		30F04480 30F04490 30F04510 30F04520 30F04530 30F04550 30F04550 30F04560 30F04570 30F04580 30F04680 30F04620 30F04620 30F04630 30F04660 30F04660 30F04660 30F04660 30F04660 30F04670 30F04680 30F04690 30F04690 30F046700
0786 0 0787 0 0788 0 0788 0 0788 0 0788 0 0786 01 0790 01 0792 0 0793 0 0794 0 0795 01 0797 01 0797 01 0796 01 0796 01 0796 01 0796 01 0796 01 0797 01	7251 1000 6A4C 72AF 1000 6E0008CA 6F00008CC 67000929 6B40 6103 6209 6700091E 401B 678008CC 668008CA 74020784 0C0008CC C40005DE 1009 4C900784 74FE0784	KEEP1	MDX SLA MDX SLA STX SLDX LDX LDX LDX LDX MDX XID SLA MDX XID SLA	2 2 L2 L3 L3 1 2 L3 L3 L4 L L L L L L	WAS +81 O CDL -81 O SENSE STACK ACOL AMSG+1 3 9 AWASB ETYPE STACK SENSE ERRFD,2 STACK TELL 9 ERRFD, ERRFD,2	MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG— COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER ALPHA MESSAGE ERROR TYPE OUT RESTORE XR3 RESTORE XR2 ADD 2 TO RETURN ADDR SELECT ERROR CARD BIT SWITCH STG CK BIT 9 TYPE ALL ER BCH PLUS OR ZERO SUB 2 RETURN ADDR	SC	30F04480 30F04490 30F04510 30F04510 30F04520 30F04530 30F04550 30F04550 30F04570 30F04580 30F04680 30F04660 30F04660 30F04660 30F04660 30F04660 30F04660 30F04660 30F04690 30F04690 30F046710
0786 0 0787 0 0788 0 0788 0 0788 0 0788 0 0786 01 0790 01 0792 0 0793 0 0794 0 0795 01 0797 01 0797 01 0796 01 0796 01 0796 01 0796 01 0796 01 0797 01	7251 1000 6A4C 72AF 1000 6E0008CA 6F0008CC 67000929 6B40 6103 6209 6700091E 401B 678008CC 668008CA 74020784 0C0008CC C40005DE 1009 4C900784	KEEP1 KEEP2 *	MDX SLA STX SLA STX LDX LDX LDX LDX LDX MDX XIO LDX MDX SLA SSC	2 2 2 L3 L3 3 1 2 L3 L3 L2 L L L L	WAS +81 O COL -81 O SENSE STACK ACOL AMSG+1 3 9 AWASB ETYPE STACK SENSE ERRFD,2 STACK TELL 9 ERRFD,-	STORE FOR TYPING MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG- COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER ALPHA MESSAGE ERROR TYPE OUT RESTORE XR3 RESTORE XR2 ADD 2 TO RETURN ADDR SELECT ERROR CARD BIT SWITCH STG CK BIT 9 TYPE ALL ER BCH PLUS OR ZERO	sc	30F04480 30F04490 30F04510 30F04520 30F04520 30F04550 30F04550 30F04560 30F04570 30F04580 30F04580 30F04610 30F04620 30F04630 30F04660 30F04660 30F04660 30F04670 30F04670 30F04720
0786 0 0787 0 0788 0 0788 0 0788 0 0788 0 0786 01 0790 01 0792 0 0793 0 0794 0 0795 01 0797 01 0797 01 0796 01 0796 01 0796 01 0796 01 0796 01 0797 01	7251 1000 6A4C 72AF 1000 6E0008CA 6F00008CC 67000929 6B40 6103 6209 6700091E 401B 678008CC 668008CA 74020784 0C0008CC C40005DE 1009 4C900784 74FE0784	KEEP1	MDX SLA MDX SLA STX SLDX LDX LDX LDX LDX MDX XID SLA MDX XID SLA	2 2 L2 L3 L3 1 2 L3 L3 L4 L L L L L L	WAS +81 O CDL -81 O SENSE STACK ACOL AMSG+1 3 9 AWASB ETYPE STACK SENSE ERRFD,2 STACK TELL 9 ERRFD, ERRFD,2	MDX WILL SKIP THIS STO COL COUNT CORRECT XR2 MDX WILL SKIP THIS SAVE XR2 SAVE XR3 MSG— COLUMN NUMBER OF MODIFIERS MESSAGE NUMBER ALPHA MESSAGE ERROR TYPE OUT RESTORE XR3 RESTORE XR2 ADD 2 TO RETURN ADDR SELECT ERROR CARD BIT SWITCH STG CK BIT 9 TYPE ALL ER BCH PLUS OR ZERO SUB 2 RETURN ADDR	SC	30F04480 30F04490 30F04510 30F04510 30F04520 30F04530 30F04550 30F04550 30F04570 30F04580 30F04680 30F04660 30F04660 30F04660 30F04660 30F04660 30F04660 30F04660 30F04690 30F04690 30F046710

								100	
			*						30F04740
			****			ROUTINE ER	R1 *******		30F04750
			*						30F04760
	_		*	-		10000	0574044 4000		30F04770
07A9		0000	ERR1	DC		/0000	RETURN ADDR NUMBER OF MODIFIERS	SE	30F04790 30F04790
OTAB	-	6102 620A		LDX		2 10	MESSAGE NUMBER		30F04800
		6700091E	•	LDX		AHASB	MSG- WAS SHOULD BE		30F04810
07AE		1010		SLA		16			30F04820
07AF		D025		STO		02BE	CORRECT DSW		30F04830
07B0		4002		BSI		ETYPE	USE ERROR TYPE OUT	SC	30F04840
0781	01	4C8007A9	•	BSC	I	ERR1	RETURN TO PROG	SX	30FC4850 30FO4860
			•						30F04870
			****			ROUTINE ER	ROR TYPE OUT ******		30F04880
			*						30F04890
			*			•			30F04900
07B3		0000	ETYPE			/0000		SE	30F04910
		C40005DE		LD	L	TELL	BIT SWITCH STORAGE		30F04920
0786 0787		100C 4CA807B3		SLA BSC	1	12 ETYPE,+Z	CK BIT 12 BYPASS ERR BCH ON MINUS	Sx	30F04930 30F04940
0161	U.	TCA60103		536	•	LITTLY	och on almos	J ^	30F04950
07B9	0	o915	•	STX	1	INSTE	NUMBER OF MODIFIERS		30F04960
07BA		6A16		STX		MSGN	MESSAGE NUMBER		30F04970
07BB	0	6816		STX	3	AM SG	ALPHA MESSAGE		30F04980
			*		_				30F04990
		44800012	REPT	BSI	1	ERROR	CALL ON ERR RT- MON	SC	30F05000
07BE		07CF		DC DC		INSTE REPT1	ADDR OF EKROR MSG		30F05010 30F05020
07BF 07C0	-	07C9 0000	•	DC		/0000	ADDR OF BUSY		30F05030
0700		0000	*			70000			30F05040
07C1	0	1010		SLA		16	CLEAR ACC		30F05050
07C2	0	D010		STO		MSGN+2			30F05060
		658007B3		LDX		ETYPE			30F05070
		6D0005E4		STX		MLSCF	SET MLSCF		30F05080
0767	00	40800011	•	BSC	I	START	RETURN TO MONITOR	SX	30F05090 30F05100
0769	01	650007BC	REPT1	אחו	1 1	REPT	BUSY ROUTINE		30F05100
		6D0005E5		STX		ML SCF+1	SET MLSCF		30F05120
		4C800011		BSC	I	START	RETURN TO MONITOR	SX	30F05130
			•						30F05140
			*			•			30F05150
			****			EOF 00 0	000 0000 0000 WAS S/B C	OL	30F05160
			*						30F05170 30F05180
07CF	Ω	0000	INSTE	חר		/0000	WORD COUNT		30F05180
0700		0000	2.1.5 1 L	DC		/0000	HEX CONTROL		30F05200
07D1		0000	MSGN	DC		/0000	MESSAGE NUMBER		30F05210
07D2	0	0000	AMSG	DC		/0000	ALPHA CONRTOL 1		30F05220
0703		0000		DC		/0000	ALPHA CNTROL 2		30F05230
07D4	-	0000	WAS	DC		/0000	ERROR BITS IN HEX		30F05240
07D5 07D6	_	0000	O2BE	DC		/0000	WHAT BITS OUGHT TO BE		30F05250
0706	U	0000	COL*	DC		/0000	COL IN HEX		30F05260 30F052 70
									30F05280
			****			FEED LAST	CARD ***********		30F05290
			*						30F05300
	_		*						30F05310
07D7			FDLCD			/0000	RETURN ADDR	SE	30F05320
		00000800				FDACD	FEED COMMAND		30F05330
UIUA	01	4C8007D7	*	BSC	I	+DLCD	RETURN TO PROG	≘X	30F05350 30F05360
		•	*						30F05370
			****			KNOW +++ B	IT SETTINGS ******		30F05380
			*			_			30F05390
		3222	•						30F05400
07DC		0000	KNOW	DC		/0000	B. C. C. C. C. C. C. C. C. C. C. C. C. C.	SE	30F05410
ט זיט	UI	C40005DE		LD	L	TELL	BIT SWITCH STORAGE		30F05420

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PROG ID 030F-4 PAGE 4 DATE 02JAN66 01MAY66 EC ND. 415490 415490B

PROG ID 030F-4 PAGF 4A

1.42 READER/PUNCH FUNCTION TEST

1442 READER/PUNCH FUNCTION TEST

02JAN66 415490

01MAY66 415490B

07DF	01	4C04080E		BSC	L	STOP,E	CK FOR PROG HALT		30F05430
		740005DF	GONE	MDX	L	TELL+1.0	CHECK FOR BEING O		30F05440
07E3	0	7003		MDX		GET			30F05450
0724	0	100A		SLA		10			30F05460
07E5	01	4C280808		BSC	L	FIND,+Z	BCH ON MINUS		30F05470
			*						30F05480
07E7	01	C40005DF	GET	LD	L	TELL+1	BIT SW STG FOR ROUT		30F05490
07E9	-	630F		LDX	_	15	LOAD XR 3		30F05500
		4C2007F2		BSC	L	STEP.Z	BCH ON BITS -		30F05510
		C400076C		LD	L	EXTRA	STG FOR RT NUMBER		30F05520
		4C9807DC		BSC	1	KNOW,+-	BCH ON ZERO	SX	30F05530
07F0	01	6780076B	_	LDX	13	COUNT	LOAD SHIFT COUNT		30F05540
	_		*		_	_			30F05550
07F2		1340	STEP	SLCA	. 3		LOOKING FOR BITS		30F05560
		4C9807DC		BSC	I	KNOW,+-	BCH ON ZERO	SX	30F05570
		F400076E		EDR	Ļ	SAVE+1	REMOVE BIT FOUND		30F05580 30F05590
		D400076C		STO	L	EXTRA	SAVE REST OF BITS		30F05600
		6F00076B		STX	LJ	COUNT	SAVE REST OF SHIFT		30F05610
07FB		1010		SLA Sto	L	16 TELL+1	CLEAR ROUTINE STORA		30F05620
	_	D40005DF 4F800800		BSC		SETUP	TO NEW ROUTINE	SX	30F05630
UIFE	91	4600000	*	B3C	13	3E TUP	TO NEW ROOTINE	37	30F05640
0800	,	0756	SETUP	מר		RTEND	ROUTINE END		30F05650
0801	-	06F0	3E 10F	DC		SET6	ROUTINE 6		30F05660
0802		06F0		DC		SET6	ROUTINE 6		30F05670
0803		06D3		DC		SET5	ROUTINE 5		30F05680
0804		0695		DC		SET4	ROUTINE 4		30F05690
0805		0667		DC		SET3	ROUTINE 3		30F05700
0806		0635		ЭC		SET2	ROUTINE 2		30F05710
0807		062A		DC		SET1	ROUTINE 1		30F05720
	_		*						30F05 730
0808	01	C400076F	FIND	LD	L	STG	OLD ROUTINE ADDR		30F05740
		D40005E4		STO	Ĺ	MLSCF			30F05750
080C	00	4C800011		BSC	1	START	RETURN TO MONITOR	SX	30F05760
			*			1			30F05770
080E	01	65000914	STOP	LDX	L1	AHALT	MSG- PROG HALT		30F05780
0810	0	6307		LDX	3	7	MESSAGE NUMBER		30F05790
0811	01	44000830		BSI	L	TYPE	USE TYPE ROUTINE	SC	30F05800
			*			- 46			30F05810
		65000819	SPOT	LDX		OVER	GET MLSCF		30F05820
		6D0005E4		STX		MLSCF	SET MLSCF	À	30F05830
0817	00	4C800011		BSC	I	START	RETURN TO MONITOR	SX	30F05840
			*						30F05850
		C40005DE	OVER	FD	Ļ	TELL	BIT SWITCH STORAGE	SE	30F05860
		4040813	•	BSC	L	SPOT,E	BCH ON BIT 15		30F05870 30F05880
0810	U.	70C3		MDX		GONE			30F05890
			-						30F05900
			****			LAST CARD	DEVISE *********		30F05910
			*			ERD! CAND	DEVISE TOTAL		30F05920
			*						30F05930
081E	٥	0000	LCD	DC		0		SE	30F05940
		650008E4		LDX	LI		LAST CARD		30F05950
0821		6303		LDX		3	MESSAGE NUMBER		30F05960
0822		400D		BSI	_	TYPE	USE TYPE RT	SC	30F05970
0823		1010		SLA		16			30F05980
0824		DOAF		STO		WAS			30F05990
		7401084F			L	RTL.1	CHANGE RETURN ADDR		30F06000
		4C80084F		8 S C	1	RTL	USE TIMING LOOP	SX	30F06010
			*						30F06020
			*						30F06030
			****			NOT READY	************		30F06040
			*						30F06050
			*						30F06060
0829		0000	NRDY	DC		/0000		SE	30F06070
		6500004B		LDX		ANRDY	NOT READY		30F06080
082C		6306		LDX	3	6	MESSAGE NUMBER	5.0	30F06090
082D	U	4002		BSI		TYPE	USE TYPE RT	SC	30F06100
									* *

82E	01	40800829		BSC	1	NRDY	RETURN TO PROG	SX	30F06110	
			*						30F06120	
			*						30F06130	
			****			PRINT ROU	TINE **********		30F06140	
			*						30F06150	
			*				A = A + A + A + A + A + A + A + A + A +		30F06160	
830		0000	TYPE	DC -		/0000	0.7 6.4764 6700465	SE	30F06170	
		C40005DE		LD	L.	TELL	BIT SWITCH STORAGE		30F06180	
833		100D		SLA		13	BCH ON MINUS	SX	30F06190 30F06200	
		4CA80830		BSC STX	Ι,	TYPE,+Z MSG	BCH ON MINUS UPDATE MESSAGE	3 ^	30F06210	
)836)837		6916 6B14		STX	-	MSG-1	NÉW MSG NUMBER		30F06220	
1001	U	9914	*	318	9	H30-1	NEW HIS NUMBER		30F06230	
1838	00	44800013	TYPEA	RST	1	LOG	CALL ON LOG	SC	30F06240	
83A		084A		DC	•	INSTL	ADDR OF MSG		30F06250	
83B		0844		DC		TYPEB	BUSY ADDR		30F06260	
83C		0000		DC		/0000	RUN WAIT		30F06270	
83D		1010		SLA		16	CLEAR ACC		30F06280	
183E		DOOF		STO		MSG+1	CLEAR 2 ND MSG AREA		30F06290	
			*						30F06300	
183F	0	COFO		LD		TYPE	RETURN ADDR		30F06310	
840	01	D40005E4		STO	L	MLSCF	UPDATE RETURN		30F06320	
842	00	4C800011		BSC	I	START	RETURN TO MONITOR	SX	30F06330	
			*						30F06340	
		65000838	TYPEB			TYPEA	BUSY ROUTINE		30F06350	
		6D0005E5		STX		ML SCF+1	SET MLSCF		30F06360	
1848	00	40800011	_	BSC	I	START	RETURN TO MONITOR	SX	30F06370	
									30F06380	
			****			A0F 00	ALPHA MESSAGE		30F06390 30F06400	
			*			AUF UU	ALPHA NESSAGE		30F06410	
			¥						30F06420	
)84A	0	0000	INSTL	DC		/0000	WORD COUNT		30F06430	
84B		0000	1.10.2	DC		/0000	HEX CONTROL		30F06440	
84C		0000		DC		/0000	MESSAGE NUMBER		30F06450	
84D		0000	MSG	DC		/0000	ALPHA CNTL		30F06460	
84E		0000		DC		/0000	ALPHA CNTROL 2		30F06470	
			*						30F06480	
			*						30F06490	
			****			ROUTINE L	OCP **********		30F06500	
			*				•		30F06510	
	_		*						30F06520	
184F		0000	RTL	DC		0	TIMING CONSTANT	SE	30F06530	
		6700F000		LDX		/F000	TIMING CONSTANT		30F06540	
1852	01	6F00076A	*	STX	LJ	CONST			30F06550	
1054	01	6500085A	RTLA	LDX		RTM			30F06560 30F06570	
		6D0005E6	KILA	STX		MLSCF+2	SET MLSCF		30F06580	
	-	4C800011		BSC	ī	START	RETURN TO MONITOR	SX	30F06590	
,0,0		10000011	*		•		KETOKK TO HOMETOK	•	30F06600	
85A	61	7401076A	RTM	MDX	L	CCNST,1	ADD ONE TO CONSTANT	SE	30F06610	
	_	70F7	SW1	MDX	_	RTLA	MDX RTLA OR MDX IRECD			
85D		1000	SW	SLA		0	SLA O OR MDX IRECD		30F06630	
85E	0	6100		LDX	1	0	NUMBER OF MODIFIERS		30F06640	
85F	0	620B		LDX	2	11	MESSAGE NUMBER		30F06650	
860	00	67000041		LDX	L3	ANINT	MSG- NO INTERRUPT		30F06660	
862	01	440007B3		BSI	L	ETYPE	USE ERROR TYPE OUT	SC	30F06670	
		64006754	*				DITE ON DURING \$4.50		30F06680	
		C40007D4	IRECD		L	WAS	BITS ON DURING INTR	SE	30F06690	
		4C18088B		BSC	L		BCH ON NO BITS		30F06700	
868	U	630F		LDX	5	15	LOAD XR 3		30F06710	
869	0	1340	INERR	SLCA	2	0	LOOK FOR BITS		30F06720 30F06730	
		F400076E	AMENK		L	SAVE+1	REMOVE BIT FOUND		30F06740	
		D400076D		STO	Ĺ	SAVE	SAVE REST OF BITS		30F06750	
186E		1010		SLA	-	16	DATE NEST OF DITS		30F06760	
		D40007D5			L	02BE			30F06770	
				- ·	_				30F06780	

PROG ID 030F-1

1442 READER/PUNCH FUNCTION TEST

1442 READER/PUNCH FUNCTION TEST

DATE EC NO.

02JAN66 415490

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0873 0 0875 0 0877 0 0879 0 0878 0 0870 0 087F 0 0881 0 0882 0 0883 0 0885 0	0847 1 4C18088B 1 65000882 1 6D0005E5	S1 B3 L0 L0 B5 L0 S1 B0x X1 B5 S1	TX L3 SI 13 DX 12 GX 13 D L SC L D L TO SC L DX L1 TX L1	SENSE STACK DSHBT SENSE STACK SAVE INERR, Z SHJ SH SENSE ZIP,+- BOX ML SCF+1	SAVE XR2 SAVE XR3 IDENTIFY BIT FOUND RESTORE XR2 RESTORE XR3 REMAINING BITS BCH ON BITS SET SWITCH IN RTL SENSE DSW BCH ON NO BITS GET MLSCF	SE	30F06790 30F06810 30F06820 30F06830 30F06840 30F06850 30F06860 30F06870 30F06880 30F06890 30F06910
088B 0 088D 0 088E 0 0890 0	1 C4000771	* ZIP LE S1	TO	START SWL SW1 SW8 SW RTL	RETURN TO MONITOR RESTORE SWITCH RESTORE SWITCH RETURN TO PROG		30F06920 30F06930 30F06940 30F06950 30F06960 30F06970 30F06980
0893 0		* * ***** * RTU DO		/0000	DATE **********	SE	30F06990 30F07000 30F07010 30F07020 30F07030 30F07040
0896 0 0898 0	1 6D0005E4 1 6D00076F 1 6F0005DD 1 4C800893	S1 S1	TX L1	MLSCF STG PST+1 RTU	RT ADDR ROUTINE ADDR RT NUMBER RETURN TO ROUTINE	sx	30F07050 30F07060 30F07070 30F07080 30F07090 30F07100 30F07110
089F 0 08A1 0	0000 1 0C0008CA 1 D40007D4 1 4C98089C 1 C4000772	* SENSB DO X1	IO L TO L SC I	O SENSE WAS SENSB,+-	PROGAM HANDLED SENSE SENSE DSW STORE DSW NO BITS FOUND	SE	30F07120 30F07130 30F07140 30F07150 30F07160 30F07170 30F07180
08A5 0 08A7 0 08A9 0 08AB 0	1 0400085D 1 650008AD 1 6D00084F 1 4C000864 1 4C80089C	\$1 \$1 \$3 \$5 \$5 \$4	TO L DX L1	SW THIS RTL IRECD SENSB	SET SWITCH IN RTL LOAD RETURN ADDR TO TYPE CONDITIONS RETURN TO PROG	sx	30F07190 30F07200 30F07210 30F07220 30F07230 30F07240
08AF 1	0829	* **** * DSWBT_DC	r	IDENTIFY D	SW ERROR *********************************		30F07250 30F07260 30F07270 30F07280 30F07290
0880 1 0881 1 0982 1 0883 1 0884 1	0775 07A9 07A9 07A9 07A9	DC DC DC DC	C C C C	BUSY ERR1 ERR1 ERR1 ERR1	14 13 12 11 10		30F07300 30F07310 30F07320 30F07330 30F07340
0885 1 0886 1 0887 1 0888 1 0889 1	07A9 07A9 07A9 07A9	DC DC DC		ERRI ERRI ERRI ERRI ERRI ERRI	9 8 7 6 5 4 OP COMPLETE		30F07350 30F07360 30F07370 30F07380 30F07390 30F07400
08BB 1 08BC 1 08BD 1 08BE 1	081E 07A9 07A9 07A9	DC DC DC	C C	LCD ERR1 ERR1 ERR1	3 2 1 0		30F07410 30F07420 30F07430 30F07440 30F07450 30F07460

	•			30F07470
				30F07480
	****	MESSAGE	ADEA **********	30F07490
	*	MESSAGE	ARCH THEFT	30F07500
				30F07510
0800 0000	BSS	E O		30F07520
0800 0 0000	FDACD DC	/0000	FEED A CARD	30F07530
08C1 0 1402	DC	/1402		30F07540
08C2 0 0000	PCHST DC	/0000	START PUNCH	30F07550
08C3 0 1401	DC	/1401		30F07560
08C4 1 0943	PUNCH DC	WAREA	PUNCH	30F07570
08C5 0 1100	DC	/1100		30F07580
0806 0 0000	RDRST DC	/0000	START READER	30F07590
0867 0 1404	DC	/1404	DC40	30F07600 30F07610
0808 1 0993	READ DC	RAREA	READ	30F07620
08C9 0 1200 08CA 0 0000	DC Sense DC	/1200 /0000	SENSE DSW	30F07630
08CA 0 0000 08CB 0 1703	DC DC	/1703	SENSE DAM	30F07640
08CC 0 0000	STACK DC	/0000	SELECT =2 STACKER	30F07650
08CD 0 1480	DC	/1480	SEELST TO STRUCKEN	30F07660
0000 0 1100	*******		******	30F07670
	*			30F07680
08CE 9 3E00	ANYP DC	/3E00	ANY PATTERN PLUS	30F07690
08CF 0 7600	DC	/7600		30F07700
08D0 0 A600	DC	/A600		30F07710
08D1 0 2100	DC	/2100		30F07720
08D2 0 5600	DC	/5600 N		30F07730
08D3 0 3E00	DC	/3E00		30F07740
08D4 0 9E00	DC	/9E00		30F07750
08D5 0 9E00	DC	/9200		30F07760 30F07770
08D6 0 3600 08D7 0 6200	DC DC	/3600 /6200		30F07770
08D8 0 7600	DC	/7600		30F07790
08D9 0 2100	DC	/2100		30F07800
08DA 0 5600	DC	/5500		30F07810
08DB 0 5E00	DC	/5E00		30F07820
08DC 0 8200	DC	/B200		30F07830
08DD 0, 9A00	DC	/9A00		30F07840
OBDE O FFFF	DC	/FFFF		30F07850
				30F07860
08DF 0 1A00	ABUSY DC	/1A00	BUSY	30F07870
08E0 0 B200	DC	/B200		30F07880
08E1 0 9A00	DC	/9A00		30F07890
08E2 0 A600	DC	/A600		30F07900 30F07910
08E3 O FFFF	DC	/FFFF		30F07920
08E4 0. 5E00	ALCD DC	/5E00	LAST CARD	30F07930
08E5 0 3E00	DC DC	/3E00	ENST CARD	30F07940
08E6 0 9A00	DC	/9A00		30F07950
08E7 0 9E00	DC	/9E00		30F07960
08E8 0 2100	DC	/2100	•	30F07970
08E9 0 1E00	DC	/1E00		30F07980
08EA 0 3E00	DC	/3E00		30F07990
08EB 0 6200	DC	/6200	S* **	30F08000
08EC 0 3200	DC	/3200		30F08010
OBED O FFFF	DC	/FFFF		30F08020
	*	,,,,,		30F08030
08EE 0 5E00	ASTOH DC	/5E00	LOAD FROM STK 2	30F08040 30F08050
08EF 0 5200 08F0 0 3E00	DC DC	/5200		30F08050 30F08060
08F0 0 3E00 08F1 0 3200	. DC	/3E00 /3200		30F08070
08F2 0 2100	DC	/2100		30F08080
08F3 0 1200	DC	/1200		30F08090
08F4 0 6200	DC	/6200		30F08100
08F5 0 5200	DC	/5200		30F08110
08F6 0 7200	DC	/7200		30F08120
08F7 0 2100	DC	/2100		30F08130
08F8 0 9A00	DC	/9A00		30F08140
			•	

DATE EC NO.

02JAN66 415490 01MAY66 415490B

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM	PART NO. 2191224 PAGE 7		IBM MAINTENANCE DIAGNOSTIC FR	GRAM FOR THE 1130 SYSTEM	PART NO. 2191224 PAGE 7A
1442 READER/PUNCH FUNCTION TEST			1442 READER/PUNCH FUNCTION TE	st	
08F9 0 9E00 DC /9E00	30F08150		0936 0 E400 DC 0937 0 2100 DC	/E400 /2100	30F08950 30F08960
08FA 0 5A00 DC /5A00 08FB 0 2100 DC /2100	30F08160 30F08170		0938 0 1200 DC	/1200	30F08970 30F08980
08FC 0 D800 DC /D800	30F08180		0939 0 B200 DC 093A 0 7600 DC	/B200 /7600	30F08990
08FD 0 2100 DC /2100 08FE 0 FFFF DC /FFFF	30F08190 30F08200	1	093B 0 1E00 DC	/1E00	30F09000
•	30F08210		093C 0 2100 DC 093D 0 C400 DC	/2100 /C400	30F09010 30F09020
08FF 0 5E00 ALDBK DC /5E00 LDAD BLANKS 0900 0 5200 DC /5200	30F08220 30F08230		093E 0 C400 DC	·/C400	30F09030 30F09040
0901 0 3E00 DC /3E00	30F08240		093F 0 FFFF DC	/FFFF END OF MESSAGE	30F09050
0902 0 3200 DC /3200 0903 0 2100 DC /2100	30F08250 30F08260		****	WRITE AREA FOR PUNCH	30F09060
*	30F08270	j	0940 0 4010 WA40 DC	/4010	30F09070 30F09080
0904 0 1A00 ABLK DC /1A00 0905 0 5E00 DC /5E00	30F08280 30F082 9 0		0941 0 4018 WA40A DC	/4018	30F09090
0906 0 3E00 DC /3E00	30F08300		0942 0 8018 WA79 DC 0943 0 8010 WAREA DC	/8018 /8010 COLUMN 1	30F09100 30F09110
0907 0 7600 DC /7600 0908 0 5A00 DC /5A00	30F08310 30F08320		0944 0 4020 DC	/4020	30F09120
0909 0 9A00 DC /9A00	30F08330		0945 0 2040 DC 0946 0 1080 DC	/2040 /1080	30F091 30 30F09140
090A 0 2100 DC /2100	30F08340 30F08350		0947 0 0900 DC	/0900	30F09150
090B 0 7200 AMRDY DC /7200 MAKE RDY	30F08360		0948 0 0600 DC 0949 0 0600 DC	/0600 /0600	30F09160 30F09170
090C 0 3E00 DC /3E00 090D 0 5A00 DC /5A00	30F083 70 30F0838 0	<u> </u>	094A 0 0900 DC	/0900	30F09180
090E 0 3600 DC /3600	30F08 390		0948 0 1080 DC 094C 0 2040 DC	/1080 /2040	30F091 90 30F092 00
090F 0 2100 DC /2100 0910 0 6200 DC /6200	30F08400 30F08410		094D 0 4020 DC	/4020	30F09210
0911 0 3200 DC /3200	30F08420		094E 0 8010 DC 094F 0 FFF7 DC	/8010 /FFF7	30F09220 30F09230
0912 0 A600 DC /A600 0913 0 FFFF DC /FFFF	30F08430 30F08440		0950 0 8880 DC	/8680	30F09240
	30F08450	S	0951 0 CCC0 DC 0952 0 EEE0 DC	/CCC0 /EEE0	30F09250 30F09260
0914 0 5600 AHALT DC /5600 PROG HALT 0915 0 6200 DC /6200	30F08460 30F08470		0953 0 FFF0 DC	/FFF0	30F09270
0916 0 5200 DC /5200	30F08480		0954 0 7777 DC 0955 0 3333 DC	/7777 /3333	30F09280 30F09290
0917 0 1600 DC /1600 0918 0 2100 DC /2100	30F08490 30F08500		0956 0 1111 DC	/1111	30F09300
0919 0 2600 DC /2600	30F0851 0		0957 0 FFF7 DC 0958 0 A000 DC	/FFF7 COL 21 /A000	30F09310 30F09320
091A 0 3E00 DC /3E00 091B 0 5E00 DC /5E00	30F08520 30F08530		0959 0 9000 DC	/9000 ALPHA RIPPLE	30F093 30
091C 0 9E00 DC /9E00	30F08540		095A 0 8800 DC 095B 0 8400 DC	/8800 /8400	30F09340 30F09350
091D 0 FFFF DC /FFFF	30F08550 30F08560	-	095C 0 8200 DC	/8200 COL 26	30F09360
091E 0 9200 AWASB DC /9200 WAS S/B	30F08690		095D 0 8100 DC 095E 0 8080 DC	/8100 /8080	30F09370 30F09380
091F 0 3E00 DC /3E00 0920 0 9A00 DC /9A00	30F08700 30F08710		095F 0 8040 DC	/8040	30F09390 30F09400
0921 0 2100 DC /2100	30F08720 30F08730		0960 0 8020 DC 0961 0 8010 DC	/8020 /8010	30F0 94 10
0922 0 2100 DC /2100 0923 0 9A00 DC /9A00	30F08740		0962 0 5000 DC	/5000	30F09420 30F09430
0924 0 BC00 DC /BC00 0925 0 1A00 DC /1A00	30F08750 30F08760		0963 0 4800 DC 0964 0 4400 DC	/4800 /4400	30F09440
0925 0 1A00 DC /1A00 0926 0 2100 DC /2100	30F08770		0965 0 4200 DC	/4200	30F09450 30F09460
0927 0 2100 DC /2100 0928 0 FFFF DC /FFFF	30F08 780 30F08 790	93 L	0966 0 4100 DC 0967 0 4080 DC	/4100 /4080	30F09470
•	30F08800		0968 0 4040 DC	/4040	30F09480 30F09490
0929 0 1E00 ACDL DC /1E00 CDLUMN 092A 0 5200 DC /5200	30F08810 30F08820	*	0969 0 4020 DC 096A 0 4010 DC	/4020 /4010	30F09500
092B 0 5E00 DC /5E00	30F08830		096B 0 3000 DC	/3000	30F09510 30F09520
092C 0 8100 DC /8100 092D 0 FFFF DC /FFFF	30F08840 30F08850		096C 0 2800 DC 096D 0 2400 DC	/2800 /2400	30F09530
	30F08860		096E 0 2200 DC	/2200	30F09540 30F09550
092E 0 9A00 ASET DC /9A00 SET BIT 8 FUNC 00 092F 0 3600 DC /3600	30F08870 30F08880		096F 0 2100 DC 0970 0 2080 DC	/2100 /2080	30F09560
0930 0 9E00 DC /9E00	30F08890		0971 0 2040 DC 0972 0 2020 DC	/2040 /2020	30F09570 30F09580
0931 0 2100 DC /2100 0932 0 1A00 DC /1A00	30F08900 30F08910		0973 0 2010 DC	/2010	30F095 90
0933 0 2200 DC /220C	30F08920		0974 0 0000 DC 0975 0 FC00 DC	/0000 /FC00	30F09600 30F09610
0934 0 9E00 DC /9E00 093: 0 2100 DC /2100	30F08930 30F08940		0976 0 03F0 DC	/03F0	30F09620
DATE 02JAN66 01MAY66	PROG ID 030F-1		DATE OZJANGO OLMAYGO		PROG ID 030F-L PAGE 7A
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IBM MA	INTENANCE D	IAGNOSTIC	PROGR	AM FOR TH	E 1130 SYSTEM	PART NO. 2191224 PAGE 8
1442 R	EADER/PUNCH	FUNCT ION	TEST			
977 0	FC00		DC	/FC00		30F09630
978 0	03F0		DC	/03F0		30F09640
979 0	0000		DC	/0000		30F09650
9/A 0	8887		DC	/8887		30F09660
097B 0	4444		DC	14444		30F09670
0 376	2222		DC	/2222		30F09680
097D 0	1111		DC	/1111		30F09690
097E 0	0007		DC	/0007		30F09700
097F 0	8880		DC	/8880		30F09710
980 0	CCC4		DC	/CCC4		30F09720
981 0	AAAZ		DC	/AAA2		30F09730
982 0	9991		DC	/9991		30F09740
983 0	4444		DC	14444		30F09750
984 0	6666		DC	/6666		30F09760
985 0	5555		DC	/5555		30F09770
986 0	2222		DC	/2222		30F09780
987 0	3333		DC	/3333		30F09790
988 0	1111		DC	/1111		30F09800
989 0	0005		DC	/0005	CHECK PCH TERM	30F09810
98A 0	0006		OC OC	/0006		30F09820
98B 0	FFF7		DC	/FFF7		30F0983N
98C 0	FFF7		DC	/FFF7		30F09840
98D 0	FFF7		DC	/FFF7		30F09850
0 389C	8000		DC	/0008	COLUMN 76	30F09860
98F 0	FFF0		DC	/FFF0	•	30F09870
990 0	FFF0		DC	/FFF0		30F09880
991 0	FFF0		DC	/FFF0		30F09890
992 0	FFF0		DC	/FFF0		30F09900
		*		-		30F09910
0993	0050	RAREA	BSS	80	AREA FOR READ	30F09920
		*				30F09930
09E4	0618		END	GO		30F09940

IBH MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PART NO. 2191224 PAGE 8A

1442 READER/PUNCH FUNCTION TEST

CROS	C L	FFF	REN	CFI	TOI	ING
LKUS	3 r	CFC	REN	LEL	131	ını

SYMBOL	VALUE	REFERENCES
ABLK	0904	072F
ABUSY	08DF	0776
ACOL	0929	0790
ADSCT	0058	05DC
AEND	0037	05DC
AHALT	0914	080E
AINT	0044	05DC
AIVD	003B	05DC
ALCD	08E4	081F
ALD	003E	05DC
ALDBK	08FF	0674,06BD
AMRDY	0908	067B,06DA
AMSG	07D2	0792,0788
ANINT	0041	05DC,0860
ANRDY	004B	05DC+082A
ANYP	08CE	0733
ACCA	0019	
		AEDC
ARDY	004C	05DC
ASB	0054	05DC
ASCT	005A	O5DC
ASET	092E	
ASTOH	OBEE	067F,06DE
ASWS	0050	05DC
AWAS	0060	
AWASB	091E	0795,07AC
BEGIN	0010	05DC,0618
BIT12	0766	0741
BOX	0882	0885
BUSY	0775	077B,C8B0
CHECK	069D	0690,06AA
CHIP	0707	06FB
CKRDR	05FC	05EC
CKSTS	C77D	0682,06C0,06E1,0736,0782
CLEAR	071E	0721
		05FC
CNTLO	0767	
CNTLI	0768	OSEE
CNTL4	0769	0609
COL	0706	0789
COMP	06F8	0705
CONST	076A	0852,085A
COUNT	076B	07F0, C7F9
DSWBT	OBAF	0875
DSW1A	05E8	05FA,0622
DSW4A	0605	0616,0626
DUP	C6C2	O6CC
END	0015	05DC,0763
ERRFD	0784	06A7,06B4,0702,070F,079C,07A3,07A5,07A7
ERROR	0012	05DC,07BC
ERR1	07A9	0781,0881,0882,0883,G884,0885,0886,0887,0888,0889,
		08BA, 08BC, C8BD, 08BE
ETRAP	0018	05DC
ETYPE	07B3	0797,0780,0787,0703,0862
EXTRA	076C	07EC,07F7
FDACD	080	065E,07D8
FDLCD	0707	0663,0691,06CF,06EC,0745,0754,07DA
FIND	0808	07E5
FLIP	0715	0718
GET		
	07E7	07E3
GO	0618	09E3
GONE	07E1	081D
HALT	0014	05DC
HOP1	064B	0649,0651
HOP2	065E	065C
ILCRP	0030	05DC,0628
ILIR	0036	C5DC

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1442 READER/PUNCH FUNCTION TEST

```
ILPAT
        0032
                  C5DC
ILO
        0028
                  050C.C624
ILI
        0029
                  CSDC
ILZ
        00ZA
                  OSDC
                  CSDC
        0028
113
:14
        0020
                  C5DC
INERR
        0869
                  087D
INILZ
        0518
                  05E2.C620
                  0789, C78E
        07CF
INSTE
                  0834
INSTL
        084A
IRFCD
        0964
                  0770,C772,C8AB
KEEP1
       0788
KEEP2
KEEP3
        0788
        05EB
KEEP4
        0608
KNOW
        07DC
                  C633,0665,0678,0693,06D1,06EE,0756,07EE,07F3
LCD
        0812
                  OSEB
                  05DC.C838
        0013
LOG
LUCBA
        0016
                  GSGC
LCOK
        05F6
                  0604
MLSCF
        0584
                  061E,075F,07C5,07CB,080A,0815,0840,0846,0856,0887,
                  0894
MSG
        084D
                  0670,060C,0731,0836,0837,083E
        0701
                  078A.07C2
MSGN
NEXT
        06F7
                  06EB
NOW
        0722
                  0706
                  CBZE, CBAF
NRDY
        0829
MIBLK
                  064E
        066€
                  066E
CHE
        063C
CVER
        0519
                  0813
                  06A3,06B0,06FE,0703,0785,07AF,086F
223E
        0705
PCHST
        08C2
                  0658,06C8,0722,074D
                  C61A, C765, C898
PST
        0590
                  C5F2,C5F4,C656,O6C4,O728,O749
C641,C64C,O688,O6A5,O6B2,O6E3,O700,O70D,O715,O717,
       0964
PUNCH
RAREA
        0993
                  C71E.C724.C726.O737.O73F.O743.O747.O8C8
                   0645,C68C,C6E7,0738
RORST
                  0600,0602,0643,068A,06E5,0739
READ
        08C8
RECK
        0747
                  C751
REPT
        07BC
                  0709
REPTI
        0769
                  078F
                  CSDC
ROKE
        0034
                  05DC
ROTY
        0033
                  05DC
RSTKB
        2017
                  0758
ATED
        0763
RTEND
        0756
                  0750+0800
                  0647,065A,0660,068E,06CA,06E9,072C,073D,074F,0825,
RTL
                  0827,C891,C8A9
                  0773,085C
RTLA
        0854
        085A
                  0854
RTM
                  062D,0638,066A,0698,06D6,06F3,089A
RTU
        0893
RTO
        0522
                  05E3.061C
RT1
                  062A
        0631
                  0635,067A
        063D
RT2
RTZA
        0641
                  0662
RT3
        0578
                  0667
RT3A
                  06AB,06B8
        0688
                  0695
RT4
        0689
RT5
        06DA
                  0603
                  C72E
RT5A
        06E3
RT6
        072F
                  06F0
        076D
                  07F5,086A,086C,087B
SAVE
SENSB
        089C
                  0631,0780,C8A1,08AD
                  05E9,0606,C758,O78C,O79A,O871,O877,O882,O89D
        OBCA
SENSE
                  07FF
        0800
SETUP
                  0607
SETI
        062A
        0635
                  0806
SET 2
        0667
                  0805
SE:3
```

SET4 0695 0804 0803 SET5 06D3 SET6 06F0 0801,0802 0663 064A,065D SKIP 081B SPOT 0813 0652,06C6,06CD,074B,0752,C78E,0798,079E,0873,0879 08CC STACK 05DC, 062F, 063A, 066C, 069A, 06DB, 06F5, 0761, 07C7, 07CD, START 0011 0800,0817,0842,0848,0858,0889 STEP O7EA 0808,0896 STG 076F 080E 07DF STOP 05DC SVKB 0035 SW 085D 0772,0881,0890,08A5 SHA 0770 0612 SWB SWJ SWL 0771 088E C87F,08A3 0772 0773 0888 0614,0770,C773,088D SWI 085C 066F,0671,07A0,C7B4,07DD,07E1,07E7,07FC,0819,0831 TELL 05DE **TERMR** 06AC 06A0 THIS OBAD **08A7** 0830 0676,0779,077E,0811,0822,082D,0834,083F TYPE TYPEA 0838 0844 TYPEB 0844 083B 0943 063F,0654,0686,069D,068B,06C2,06F8,08C4 WAREA 0704 05F0,05F6,C5FE,060D,0786,0824,0864,089F WAS 0630,0684 0940 WA40 0941 06B9 WA40A WA79 0942 0722 **XERR** 0774 05F8,060B,0610

06AE,06B7

0709,0712

0866,0883

XXX

XXXX

ZIP

06AF

070A

0888

1442 READER/PUNCH FUNCTION TEST

BM	MAINTENANCE	DIAGNOSTIC	PROGRAM F	FOR	THE	1130	SYSTEM

1442 TIMING TEST

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1442 TIMING TEST

1. PURPOSE

THE 1442 TIMING TEST IS DESIGNED TO CHECK THE FOLLOWING CONDITIONS.

- A. READ AND PUNCH COLUMN TIMING TOLERANCES.
- B. PUNCH COLUMN DELAY TOLERANCE.
- C. PROPER DSW RESPONSES.
- D. READ REGISTRATION OR COMPARE ERRORS.
- E. PUNCH ECHO CHECK ERRORS.
- F. CORRECT COLUMN INTERRUPT COUNTS.

THE PROGRAM WILL NOT CHECK THE FOLLOWING ITEMS WHICH MUST BE CHECKED BY SCUPING WHILE PROGRAM IS RUNNING.

- A. READ CELL DURATION
- B. EMITTER TIMING
- C. READ OR PUNCH SINGLE SHOT TIMING (LOGIC PAGE XR301)

2. PREREQUISITES

2.1 PROGRAM PREREQUISITES

THE 1442 TIMING TEST MUST RUN UNDER CONTROL OF THE 1130 DIAGNOSTIC MONITOR. THE TEST MAY NOT BE RUN IN OVERLAP WITH ANY OTHER PROGRAM.

2.2 DECK CUSTOMIZATION

1442 MODEL NUMBER INFORMATION MAY BE MADE A PERMANENT PART OF THE 1442 TIMING TEST OBJECT DECK BY INSERTING AN EDIT CARD IN FRONT OF THE LAST CARD OF THE DECK.

THE EDIT CARD SHOULD BE PUNCHED AS FOLLOWS,

FOR MODEL 6

FOR MODEL 7

COLS 1-10, +05E0 0006 COLS 11-19, BLANK COLS 20-29, 1442 MOD 6 COLS 1-10, +05E0 0007 COLS 11-19, BLANK COLS 20-29, 1442 MOD 7

IF THE PROGRAM DOES NOT FIND MODEL INFORMATION, IT WILL GENER'TE A PRINTCUT REQUIRING OPERATOR TO ENTER THE INFORMATION. THE PROCEDURE TO ENTER THE INFORMATION IS DESCRIBED IN PARAGRAPH 3.2 PROGRAM OPERATION.

2.3 EQUIPMENT PREREQUISITES

THE FOLLOWING EQUIPMENT IS REQUIRED.

- 1. 1131 CENTRAL PROCESSING UNIT.
- 2. 1442 CARD READ/PUNCH MODEL 6 OR 7.

3. USE PROCEDURE

3.1 LOADING

THIS PROGRAM FOLLOWS THE LOADING PROCEDURES ESTABLISHED BY THE 1130 DIAGNOSTIC MONITOR. REFER TO D. M. DOCUMENTATION.

THE FOLLOWING REQUIREMENTS MUST BE MET.

- NO OTHER PROGRAM DECK SHOULD FOLLOW THE 1442 TIMING TEST DECK.
- 2. PROGRAM DECK SHOULD BE FOLLOWED BY A DECK OF ELANK CARDS ABOUT 5 INCHES THICK.
- 3. IF THE MODIFY DATA OPTION IS DESIRED, PLACE THE CARD WITH THE DESIRED DATA AFTER THE LAST CARD OF THE PROGRAM DECK.

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1442 TIMING TEST

OPERATION 3.2

3.2.1 PROGRAM EXECUTION

A. LOAD AND GO MODE

ALL ROUTINES WILL BE EXECUTED WITH NO OPTIONS ALL DETECTED ERRORS WILL BE IDENTIFIED BY AN ERROR TYPEOUT.

B. SINGLE PROGRAM MODE.

AFTER PROGRAM IS LOADED. THE MONITOR WILL WAIT TO ALLOW CPTIONS TO BE SPECIFIED.

- 1. SPECIFY DESIRED OPTIONS AS INSTRUCTED IN SECTION 3.2.2. IF NO OPTIONS ARE DESIRED, NO ENTRY IS REQUIRED.
- 2. TO START EXECUTION SET BIT SWITCHES TO DOBO. THEN PRESS INTERRUPT REQUEST KEY.
- C. IF THE MODEL NUMBER EDIT CARD IS NOT PART OF THE PROGRAM DECK. ENTER THE INFORMATION AS FOLLOWS.
 - FOR MODEL 6 SET CUNSOLE ENTRY SWITCHES TO AFO6. FOR MODEL 7 SET CONSOLE ENTRY SWITCHES TO AFOT.
 - 2. PRESS THE INTERRUPT REQUEST KEY. AN ACKNOWLEDGE PRINTOUT WILL OCCUR, AND THE INFORMATION WILL BE ENTERED.

3.2.2 PROGRAM OPTIONS

THE OPERATOR MAY MODIFY THE EXECUTION OF THE PROGRAM ANY TIME BEFORE OR AFTER IT HAS STARTED EXECUTION BY ENTERING PROGRAM CONTROL OPTIONS OR ROUTINE SELECTION OPTIONS.

- A. PROGRAM CONTROL OPTIONS
 - 1. TO SELECT PROGRAM OPTIONS SET BIT SWITCHES AS INDICATED

SW. SETTING CONTROL

RESET ALL CONTROL OPTIONS 2F00 BYPASS ERROR MESSAGE PRINTOUTS 2F04 SINGLE CARD WAIT 2F08 HODIFY DATA TABLE (RTN 4) 2F80 BYPASS ERROR MESSAGES WITH DATA MODIFIED

- 2. PRESS INTERRUPT REQUEST KEY.
- B. ROUTINE SELECTION

EXECUTION WILL START WITH THE SELECTED ROUTINE.

1. TO SELECT ROUTINE OPTIONS SET BIT SWITCHES AS INDICATED

SW. SETTING ROUTINE

6F04 1 PUNCH ONLY 2 READ ONLY 6F02 3 FEED ONLY 6F01 6F06 RUN ROUTINE 1 THEN ROUTINE 2

2. PRESS INTERRUPT REQUEST KEY.

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1442 TIMING TEST

NORMAL OPERATION 3.3

NORMAL PROGRAM OPERATION CONSISTS OF RUNNING THE PROGRAM IN LOAD AND GO MUDE WITHOUT ANY OPTIONS SELECTED. NORMAL PROGRAM OPERATION PROCEEDS AS FOLLOWS.

PROGRAM WILL CHECK THAT FIRST CARD IS BLANK AND WILL THEN BEGIN THE PUNCH ROUTINE.

BLANK DECK WILL BE PUNCHED WITH DATA FROM DATA TABLE. WHEN THE HOPPER BECOMES EMPTY, PRINTOUT AZFOZ WILL OCCUR AND PROGRAM WILL STOP AT WAIT 1. AT THIS POINT PROCEED AS FOLLOWS,

- A. DEPRESS 1442 START KEY.
- B. DEPRESS PRUG. START FFY AT CPU.

PROGRAM WILL PUNCH THE LAST CARD, PRINTOUT A2FO3 WILL OCCUR, AND PROGRAM WILL STOP AT WAIT 1. AT THIS POINT PROCEED AS FOLLOWS.

- A. REMOVE PUNCHED CARDS FROM STACKER NO. 2 AND PLACE IN HOPPER.
- DEPRESS 1442 START KEY. C. AT CPU DEPRESS PROG. START KEY.

PROGRAM WILL READ THE PUNCHED CARDS UNTIL THE HOPPER BECOMES EMPTY. AT THAT TIME PRINTOUT A2FOZ WILL AGAIN OCCUR, AND PROGRAM WILL STOP AT WAIT 1.

IF NO ERROR PRINTOUTS OCCURRED. THE 1442 TIMING IS CORRECT AND THE TEST MAY BE CONSIDE TO COMPLETE. DEPRESS NPRO TO CLEAR FEED.

REFER TO PARAGRAPH 4. PRINTOUTS, FOR A DESCRIPTION OF THE POSSIBLE PRINTOUTS THAT MAY OCCUR, AND FOR THE ACTION TO BE TAKEN IN EACH CASE.

PROGRAM TERMINATION

THERE IS NO NORMAL PROGRAM TERMINATION. THE PROGRAM WILL STOP WHEN THE 1442 HOPPER BECOMES EMPTY, OR THE 1442 STOP KEY IS DEPRESSED.

DO NOT USE THE CPU'S PROG. STOP KEY TO STOP THE PROGRAM. THIS WILL CAUSE A TIMING ERROR TO OCCUR AND WILL NOT SERVICE THE LEVEL 5 INTERRUPT.

PROGRAM WAITS.

AT LOCATION 0600 WAIT FOR OPERATOR TO ENTER MODEL NUMBER. SI _ SECTION 3.2.1.C. AT LOCATION 07D6 WAIT AT END OF CARD. PROGRAM WILL STOP AT 3001 WAIT 1 AFTER ANY PRINTOUT, OR AFTER EACH CARD IF SINGLE

RESTART 3.6

TO RESTART THE PROGRAM.

- 1. SET SWITCHES TO 40AF.
- 2. PRESS INTERRUPT REQUEST KEY.

CARD WAIT OPTION IS SELECTED.

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1442 TIMING TEST

4. PRINTGUTS

ALL PRINTOUTS ARE IN THE STANDARD FORMAT.

APPNN OORR (MESSAGE)

EPPNN OORR (MESSAGE)

> WHERE A IDENTIFIES STATUS MESSAGES E IDENTIFIES ERROR MESSAGES PP IS THE PID OF THE PROGRAM CAUSING THE MESSAGE NN IS THE MESSAGE SEQUENCE NUMBER RR IS THE ROUTINE NUMBER MESSAGE IS ANY VARIABLE INFORMATION

STATUS MESSAGES

A2F01 0000 ENTER MOD NUMBER.

THIS PRINTOUT OCCURS WHEN THE PROGRAM FINDS THE MODEL NUMBER AREA BLANK. THE MODEL NUMBER MAY BE ENTERED BY MEANS OF AN EDIT CARD. SEE PARAGRAPH 2.1 PROGRAM PREREQUISITES) OR BY MEANS OF THE CONSOLE ENTRY SWITCHES (SEE PARAGRAPH 3.2 PROGRAM OPERATION).

A2F02 000X RDR DSW NOT READY- PRESS START

THIS PRINTOUT INDICATES THAT THE 1442 WAS NOT READY WHEN ITS DSW WAS SENSED. WHEN THE PRINTOUT OCCURS.

- A. MAKE 1442 READY (IF NO FEED CHECK JUST PRESS 1442 START).
- B. DEPRESS PROG START. PROGRAM WILL CONTINUE.

A2F03 0001 LAST CARD. LOAD PCHED CARDS + START

THIS PRINTOUT OCCURS AFTER THE LAST CARD HAS BEEN PUNCHED. WHEN THIS PRINTOUT DCCURS,

- A. REMOVE PUNCHED CARDS FROM STACKER NO. 2 AND PLACE IN HOPPER. B. DEPRESS 1442 START KEY. READY LIGHT SHOULD GO ON.
- C. AT CPU DEPRESS PROG. START KEY. READ ROUTINE WILL BEGIN.

ERROR MESSAGES.

ALL NUMERICAL PRINTOUTS ARE IN HEXADECIMAL FORMAT.

E2F01 0005 CARD NOT BLANK

THIS PRINTOUT INDICATES THAT A PREPUNCHED CARD WAS FED INTO THE PUNCH STATION AT BEGINNING OF PUNCH ROUTINE. WHEN THIS PRINTOUT OCCURS,

- A. DEPRESS NPRO TO CLEAR FEED.
- B. REMOVE PREPUNCHED CARD AND INSURE THAT NO OTHER PUNCHED CARDS ARE IN DECK OF BLANK CARDS TO BE PUNCHED.
- DEPRESS 1442 START KEY.
 AT CPU, ENTER 40AF IN CONSOLE ENTRY SWITCHES TO REINITIALIZE PROGRAM. PROGRAM WILL CONTINUE.

E2F02 0000 INVLD SWS

THIS PRINTOUT INDICATES THAT NO ENTRY WAS FOUND IN PROGRAM TEST OPTION BIT SWITCH AREA. ENTER 6FOX IN CONSOLE ENTRY SWITCHES TO CONTINUE. SEE SECTION 3.2.2.B.

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1442 TIMING TEST

E2F03 000X ND INTRPT

ROUTINE NUMBER MAY BE 1, 2, OR 3. TIMER OVERFLOW. NO INTERRUPT WAS RECEIVED 4 SECONDS AFTER A COMMAND WAS GIVEN. IF THIS PRINTOUT OCCURS, CHECK,

- A. FEED CLUTCH LATCH (LOGIC PAGE XR211)
- B. MOTOR DELAY (LOGIC PAGE XR211)

E2F04 000R XXXX XXXX XXXX WAS, S/B, COL- COLUMN ERROR

- A. THIS PRINTOUT OCCURS FOLLOWING ANY 1442 ERROR WHICH SETS THE 1442 ERROR BIT (BIT 2) IN THE 1442 DSW. THIS ERROR BIT INDICATES THAT ONE OF SEVEN ERROR CONDITIONS EXISTS IN THE 1442.
 - 1. READ REGISTRATION CHECK
 - 2. PUNCH CHECK
 - 3. HOPPER CHECK
 - 4. TRANSPORT CHECK
 - 5. FEED CHECK READ STATION
 6. FEED CHECK PUNCH STATION

 - 7. FEED CLUTCH CHECK
- B. IF THE ERROR IS OTHER THAN A READ REGISTRATION OR PUNCH CHECK. CLEAR THE 1442 - REPLACE THE CARDS IN THE HUPPER, THEN PRESS 1442 START AND 1131 START TO CONTINUE. NOTE -- WAS AND S/B WILL NOT AGREE IF ERROR WAS IN ROUTINE 1.
- C. IF THE ERROR BIT WAS SET BY A READ REGISTRATION CHECK THE PRINTOUT SHOULD BE INTERPRETTED AS FOLLOWS. READING FROM LEFT TO RIGHT---
 - 1. WORD THREE IS THE DATA THAT WAS READ.
 - 2. WORD FOUR IS THE CATA THAT SHOULD BE IN THE COLUMN JUST READ.
 - 3. WORD FIVE IDENTIFIES THE CARD COLUMN IN WHICH THE ERROR WAS DETECTED.

ONLY ONE ERROR WILL BE DETECTED PER CARD AS READING TERMINATES WHEN THE ERROR IS DETECTED.

- D. IT THE ERROR BIT WAS SET BY A PUNCH CHECK THE PRINTOUT SHOULD BE INTERPRETTED AS FOLLOWS -- READING FROM LEFT TO RIGHT --
- 1. WORD THREE CONTAINS THE CONTENTS OF THE 1442 BUFFER REGISTER FOLLOWING THE PUNCH ECHO CHECK. ANY BIT ON IN THIS WORD IDENTIFIES THE DESCREPANCY BETWEEN THE PUNCH DIE ECHO AND THE DATA WHICH WAS TO BE PUNCHED IN THE COLUMN.
- WORD FOUR CONTAINS THE DATA THAT SHOULD HAVE BEEN PUNCHED IN THE COLUMN.
- 3. WORD FIVE IDENTIFIES THE CARD COLUMN IN WHICH THE ERROR WAS DETECTED. THERE WILL CALY BE ONE ERROR PER CARD AS PUNCHING IS TERMINATED WHEN THE ERROR IS DETECTED. FOLLOWING A PUNCH RESPONSE INTERRUPT THIS ROUTINE DELAYS 300 USEC (MAXIMUN ALLOWABLE PUNCH DELAY) BEFORE EXECUTING A PUNCH COMMAND.

WHEN THIS ERROR PRINTOUT OCCURS, CHECK THE BUFFER REGISTER, COMPL GATE, CGMPL SPD. (LOGIC PAGES XR341, 351, 361, 321, 331, 311).

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1442 TIMING TEST

E2F05 0002 XXXX XXXX 00XX WAS, S/B, COL- READ COMPARE

THIS PRINTOUT INDICATES AN INCORRECT COMPARISON BETWEEN DATA READ AND DATA IN DATA TABLE. READING FROM LEFT TO RIGHT,

- A. WORD THREF REPRESENTS THE INCORRECT DATA (WAS).
- WORD FOUR IS THE CORRECT DATA (S/B).
- WORD FIVE IS THE COLUMN WHERE ERROR OCCURRED (COL). IF THERE IS MORE THAN ONE ERROR ON THE CARD ONLY THE ERROR IN THE HIGHEST NUMBERED COLUMN WILL BE IDENTIFIED BY THIS PRINTOUT (CARD IS CHECKED STARTING WITH COLUMN 80).

D. WORDS NINE AND TEN DESCRIBE THE TYPE OF ERROR.

WHEN THIS PRINTCUT OCCURS CHECK THE PUNCHED CARD TO SEE IF IT IS PUNCHED CORRECTLY. IF THE CARD IS CORRECTLY PUNCHED, CHECK THE DATA BUFFER REGISTER.

E2F06 000% XXXX 4003 WAS, S/B- COL DSW

THIS PRINTOUT INDICATES A LEVEL O (COLUMN) DSW ERROR. WORD THREE 1S THE ERROR DSW. CHECK THE DSW CIRCUITS (LOGIC PAGES XR371, 381). ROUTINE NUMBER MAY BE 1 DR 2.

E2F07 000X XXXX 0800 WAS, S/B- END DSW

LEVEL 4 (END-OP) DSW ERROR. WORD THREE IS THE ERROR DSW. CHECK DSW CIRCUITS. ROUTINE NUMBER MAY BE 1, 2, 3, 4, OR 5.

E2F08 000X NO COLUMN INTRPT

END OP WAS RECEIVED. BUT NO COLUMN INTERRUPTS ON READ OR PUNCH. CHECK READ OR PUNCH RESPONSE (LOGIC PAGE XR 291). ROUTINE NUMBER MAY BE 1, 2, OR 4.

E2F09 000X XXXX XXXX 00XX WAS, S/B, COL- COL TIME LONG

ROUTINE NUMBER MAY BE 1 OR 2. THIS PRINTOUT INDICATES THAT EITHER READ OR PUNCH COLUMN TIME EXCEEDED MAXIMUM LIMITS. TIME FIGURES ARE GIVEN IN MICROSECONDS. FROM LEFT TO RIGHT.

- A. WORD THREE IS ACTUAL TIME FOR READ OR PUNCH COLUMN (WAS).
- WORD FOUR REPRESENTS THE MAXIMUM TIME LIMIT FOR A READ OR PUNCH COLUMN (S/B).
- WORD FIVE REPRESENTS THE COLUMN THAT EXCEEDED THE MAXIMUM TIME LIMIT (COL).
- D. WORDS NINE, TEN, AND ELEVEN IDENTIFY THE ERROR.

WHEN THIS PRINTCUT OCCURS.

- A. CHECK ADJUSTMENT AND LUBRICATION OF FEED AND READ CLUTCH.
- B. CHECK PUNCH INCREMENTAL DRIVE.

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1442 TIMING TEST

E2F10 000X XXXX XXXX 00XX WAS, S/B, CCL- COL TIME SHORT

ROUTINE NUMBER MAY BE 1 OR 2. THIS PRINTOUT INDICATES THAT EITHER READ OR PUNCH COLUMN TIME WAS SHORTER THAN THE MINIMUM TIME LIMIT. TIME FIGURES ARE GIVEN IN MICROSECONDS. FROM LEFT TO RIGHT.

- A. WORD THREE IS ACTUAL TIME FOR READ OR PUNCH COLUMN (WAS).
- B. WORD FOUR REPRESENTS THE MINIMUM TIME LIMIT FOR A READ OR PUNCH COLUMN (S/B).
- WORD FIVE REPRESENTS COLUMN THAT WAS UNDER THE MINIMUM TIME LIMIT (COL).
- D. WORDS NINE, TEN, AND ELEVEN IDENTIFY THE ERROR.

WHEN THIS PRINTCUT OCCURS.

- A. CHECK ADJUSTMENT AND LUBRICATION OF FEED AND READ CLUTCH.
- B. CHECK PUNCH INCREMENTAL DRIVE.

E2F11 000X 00XX 0050 WAS, S/B- COL COUNT

ROUTINE NUMBER MAY BE 1, 2, OR 4. THIS PRINTOUT INDICATES THAT THE NUMBER OF COLUMN INTERRUPTS WAS NOT 80. WHEN IT OCCURS CHECK TAPE ON EMITTER DISK! AND PUNCH OR READ RESPONSE (LOGIC PAGE XR 291).

- A. WORD THREE REPRESENTS THE NUMBER OF COLUMN INTERRUPTS RECEIVED (WAS).
- WORD FOUR REPRESENTS THE NUMBER OF COLUMN INTERRUPTS THAT SHOULD HAVE BEEN RECEIVED (S/B).
- C. WORDS SEVEN AND EIGHT IDENTIFY THE ERROR.

SAMPLE PRINTOUTS

THE FOLLOWING ARE SAMPLE PRINTOUTS FOR SPECIFIC ERRORS.

E2F04 0002 8010 8000 0001 WAS, S/B, COL- COLUMN ERROR

E2F06 0002 A801 8003 WAS. S/B- COL DSW

E2F07 0002 2801 0800 WAS. S/B- END DSW

E2F11 0002 0001 0050 WAS. S/B- COL COUNT

READ REGISTRATION ERROR. THESE PRINTOUTS TELL THE OPERATOR THAT A READ REGISTRATION ERROR HAS OCCURRED IN COLUMN 1, AND THAT THE ERROR WAS AN EXTRA BIT 11 (9 PUNCH). ALSO PRESENTED ARE THE HIGHEST COLUMN DSW, THE END OP DSW, AND THE TOTAL COLUMN COUNT FOR THAT CARD.

E2F05 0002 C200 C000 0011 WAS, S/B, COL- READ COMPARE

READ COMPARE ERROR. THIS PRINTOUT TELLS THE OPERATOR THAT THE DATA READ IN COLUMN 17 (HEX 11) DOES NOT MATCH THE DATA TABLE (I.E., CONTAINED AN EXTRA BIT 6).

E2F04 0001 0200 0000 003F WAS, S/B, COL- COLUMN ERROR

E2F06 0001 6003 4003 WAS, S/B- COL DSW

E2F07 0001 2801 0800 WAS. S/B- END DSW

E2F11 0001 003F 0050 WAS, S/B- CGL COUNT

PUNCH ECHO CHECK ERROR. THESE PRINTOUTS TELL THE OPERATOR THAT A PUNCH ECHO CHECK HAS OCCURRED IN COL 63 (HEX 3F), AND THAT THE BIT THAT CAUSED THE FAILURE IS BIT 6 (4 PUNCH). OPERATOR SHOULD COMPARE CARD COLUMN 63 AGAINST S/B TO DETERMINE IF ERROR IS DUE TO PUNCH FAILURE, OR FALSE ECHO CHECK. ALSO PRESENTED ARE THE HIGHEST COLUMN DSW, THE END OP DSW: AND THE TOTAL COLUMN COUNT FOR THAT CARD.

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1442 TIMING TEST

E2F10 0002 0301 036B 000C WAS, S/B, COL- COL TIME SHORT

READ TIMING ERROR. THIS PRINTOUT TELLS THE OPERATOR THAT TIME BETWEEN COLUMN 11 AND COLUMN 12 (HEX OC) WAS 769 USEC. SHOULD HAVE BEEN 875 USEC. MINIMUM. THE 1442 FEED CLUTCH MAY NEED SERVICING.

5. COMMENTS

5.1 PROGRAM DESCRIPTION

THE 1442 TIMING TEST CONSISTS OF A CONTROL ROUTINE, FIVE MAIN ROUTINES, AND AN ERROR LOGGING ROUTINE.

THE CONTROL ROUTINE ACCOMPLISHES THE PROGRAM OPTIONS SPECIFIED BY THE OPERATOR.

ROUTINE 1, PUNCH ROUTINE, PUNCHES CARDS FROM DATA IN THE DATA TABLE, CHECKS DSW'S, DELAYS PUNCH RESPONSE BY 300 USEC. THE ROUTINE ALSO READS BUFFER ON PUNCH ECHO CHECKS, CHECKS PUNCH COLUMN TIMING, AND CHECKS FOR CORRECT CCLUMN COUNT.

ROUTINE 2, READ ROUTINE, READS CARDS PUNCHED BY ROUTINE 1, AND COMPARES THEM AGAINST DATA IN THE DATA TABLE. IT ALSO CHECKS DSW*S, CHECKS READ COLUMN TIMING, AND CHECKS FOR CORRECT COLUMN COUNT.

ROUTINE 3, FEED ROUTINE, FEEDS CARDS AND CHECKS END OP DSW DNLY.

ROUTINE 4, MODIFY DATA TABLE ROUTINE, REPLACES DATA IN DATA TABLE WITH DATA IN CARD FOLLOWING THE LAST CARD OF THE PROGRAM DECK. THE DATA TABLE WILL BE MODIFIED ONLY IF THE MODIFY DATA TABLE OPTION HAS BEEN SELECTED.

ROUTINE 5 CHECKS THAT THE FIRST CARD FOLLOWING THE PROGRAM DECK IS A BLANK. THE ROUTINE IS USED TO PREVENT THE ACCIDENTAL PUNCHING OF ANOTHER PROGRAM S CARDS.

IN THE NORMAL MODE OF OPERATION, ROUTINES 5, 1, AND 2 ARE EXECUTED SEQUENTIALLY.

5.2 PROGRAM CONTROL OPTIONS DESCRIPTION

5.2.1 BYPASS ERROR MESSAGE OPTION

THIS OPTION WILL BYPASS THE ERROR PRINTOUT ROUTINE, EXCEPT FOR PRINTOUTS E2F01, AND E2F02. THIS OPTION IS USED MAINLY FOR SCOPING, WHEN IT IS DESIRED TO RUN PROGRAM WITHOUT STOPPING AFTER AN ERROR (PROGRAM WILL NORMALLY STOP AT WAIT 1 AFTER ANY PRINTOUT).

5.2.2 SINGLE CARD WAIT OPTION

THIS OPTION WILL CAUSE PROGRAM TO STOP AFTER EACH CARD IS EITHER PUNCHED, READ, OR FED. TO CONTINUE, DEPRESS PROG START KEY.

5.2.3 MODIFY CATA TABLE OPTION

WHEN THIS OPTION IS SELECTED, THE DATA IN THE DATA TABLE IS REPLACED BY DATA IN CARD FOLLOWING LAST CARD OF PROGRAM DECK. THIS OPTION IS USED WHEN IT IS DESIRED TO PUNCH OR READ A SPECIFIC DATA PATTERN, SUCH AS ONE THAT HAS CAUSED FAILURES BEFORE.

5.3 PROGRAM TEST OPTIONS DESCRIPTION

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5.3.1 FEED ONLY OPTION

WHEN THIS OPTION IS SELECTED, THE PROGRAM WILL FEED CARDS AND CHECK THE END OP DSW ONLY. THE OPTION IS USED FOR SCOPING READ CELL DURATION, EMITTER TIMING, ETC.

5.3.2 READ ONLY OPTION

THIS OPTION IS USED WHEN IT IS DESIRED TO READ CARDS ONLY. WHEN HOPPER BECOMES EMPTY, IT CAN BE REFILLED WITH PUNCHED CARDS AND READER MADE READY. CEPRESSING PROG. START KEY WILL CAUSE PROGRAM TO CONTINUE. THE PUNCHED CARDS TO BE READ MUST MATCH THE DATA TABLE DATA OR ERRORS WILL BE INDICATED.

5.3.3 PUNCH ONLY OPTION

USED WHEN ONLY PUNCHING IS DESIRED.

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1442 TIMING TEST

6. APPENDIX

6.1 SAMPLE OUTPUT

THE FIGURE BELOW SHOWS CARD PUNCHED FROM PROGRAM'S INTERNAL DATA TABLE.

1111	2115	11	1111	
1111	8888	11	2111	
8 CHRES 0 0 0 0 0	000000222200000	0 0 0 0 2 2 0 0 0 0 0 0 0	ec iii	
22228388222	222722228888222	222222222222	 	K
				 3 3 3 3 3 5 5 5 7 8 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
*********		4444 4 4444 4 4 4 4 4 4 4 4 4 4 4 4 4 4	 	
555555 222	5555555555 8888	5555 22 5555 22		55555558888885888888588
				6 6 6 6 6 6 6 8 8 8 8 8 8 8 6 8 8 8 6 8 8 8
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	[1877887788887	77777777772222777	7777778888888878887888
		*** *** ***** **		
3933333333	 2 3 3 3 3 3 3 5 5 5	I I I I I I I I I I I I I I I I I I I 	9 5 9 5 9 5 9 5 9 5 8 8 8 8 9 5 9 9 9	

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****	1442/1130 TIMING DIAGNOSTIC *****	32F10000
	* * * * * * * * * * * * * * * *	32F00010
•		32F00020
+ LGAD -	MONITOR + 1442 TEST + BLANK CDS *	32F00030
•		32F00040
•		32F00050
***** ****	BIT SWITCH SETTINGS **** *****	32F00060
	* * * * * * * * * * * * * * * *	32F00070
•		32F00080
* 1 00A0	LOAD AND GO MODE - PUNCH DELAYED	32F00090
•	UNTIL LAST CARD, THEN READ.	32F00100
•	PUNCHED CARDS.	32F00110
* * * * *	* * * * * * * * * * * * * * * *	32F00120
* ,		32F00130
* 1 0020	SELECT TEST OPTION MODE	32F00140
*		32F00150
* 2 AFCX	SPECIFY MOD NUMBER, PRESS INT REQ	32F00160
•		32F00170
* 6	MOD 6	32F00180
•	MOD T	32F00190 32F00200
* 7	MOD 7	32F00200 32F00210
• • • • • • • • • • • • • • • • • • • •	CELCT CONTROL COTTON DOCCC INT DEA	32F00210
* 3 2FXX	SELCT CONTROL OPTION, PRESS INT REQ	32F00220
*	MODIFY DATA TABLE (ONE CARD)	32F00240
* 80	MODIFY DATA TABLE (ONE CARD)	32F00250
*	BYPASS PUNCH DELAY	32F00260
* 40 *	BIPASS PUNCH DELAT	32F00270
+ + C8	SINGLE CARD WAIT	32F00280
* 00	SINGLE CARD HALL	32F00290
÷ 04	BYPASS ERROR PRINT ROUTINE	32F00300
* 07	DIFACT ERROR TREET HOUTING	32F00310
*		32F00320
* 4 6F0X	SELECT TEST OPTION, PRESS INT REQ	32F00330
*		32F00340
* C6	PUNCH THEN READ	32F00350
*	TONOTI THE THE TANK	32F00360
* 04	PUNCH ONLY	32Fu0370
*		32F00380
* 02	READ ONLY	32F0039 0
*		32F00400
* 01	FEED ONLY	32F00410
*		32F0042 0
*		32F00 430
* 5 CO80	EXECUTE , PRESS INT	32F0044 0
*		32F00450
* * * * * *	* * * * * * * * * * * * * * * * *	32F00460
*	<u>-</u>	32F00470
* 6 40AF	PROGRAM RESELECT AND RESTART	32F00480
*		32F00490
* * * * * *	* * * * * * * * * * * * * * * * *	32F00500
*		32F00510
OR G	*+1500	32F00520
*	DROC TRANSCER MESTOR	32F00530 32F00540
	PROG TRANSFER VECTOR	32F00540 32F00550
*		32F00560
BEGIN EQU	16	32F00570
START EQU	BEGIN+1	32F00570
ERROR EQU	START+1	32F00590
LOG EQU	ERROR+1	32F00600
HALT EQU	LOG+1	32F00610
END EQU	HALT+1	32F00620
≠ LDGBY EQU	END+1	32F00630
RSTKB EQU	LOGBY+1	32F00640
ETRAP EQU	RSTKB+1	32F00650
AQSA EQU	ETRAP+1	32F0066u
AUDA EUU *	LINDI TA	32F00670
•		

•	•		
0028	ILO EQU	40	32F00680
0029	IL1 EQU	ILO+1	32F00690
002A	IL2 EQU	IL1+1	32F00700
002B	IL3 EQU	IL2+1	32F00710
002C	IL4 EQU	IL3+1	32F00720
0030	ILCRP EQU	IL4+4	32F00730
0032 0033	ILPAT EQU RQTY EQU	ILCRP+2 ILPAT+1	32F00740 32F00750
0034	ROKB EQU	RQTY+1	32F00760
0035	SVKB EQU	RQKB+1	32F00770
0036	ILIR EQU	SVKB+1	2F00780
0030	*		32F00790
0037	AEND EQU	ILIR+1	32F00800
003B	AIVD EQU	AEND+4 INVLD	32F0U810
003E	ALD EQU	AIVD+3 LD	32F00820
0041	ANINT EQU	ALD+3 NO INTRPT	32F00830
0044	AINT EQU	ANINT+3 INTRPT	32F00840
0048	ANRDY EQU	AINT+7 NRDY	32F00850
004C	ARDY EQU	ANRDY+1 RDY	32500860
0050	ASWS EQU	ARDY+4 SWS	32F00870
0054	ASB EQU	ASWS+4 S/B	32F00880
0058	ADSCT EQU ASCT EQU	ASB+4 ADSCT+2 SELCT	32F00890
C05A 0060	ASCT EQU AWAS EQU	ASCT+6 WAS	32F0090G 32F00910
006 A	EAQO EQU	AWAS+10	32F00910
0008	* * * * *	* * * * * * * * * * * * * * * * *	32F00930
	****	PROGRAM CONTROL TABLE *****	32F00940
	•		32F00950
05DC 0 2F00	PID DC	/2FOO PROGRAM IDENTIFICATION	32F00960
05DD 0 00C0	DC	/0000 ROUTINE	32F00970
05DE 0 0000	BSWO DC	/0000 BIT SW 0 - CONTROL OPT	32F00980
05DF 0 0006	BSW1 DC	/0006 BIT SW 1 - TEST SEL	32F00990
05E0 0 0000	BSW2 DC	/0000 BIT SW 2 - MODEL 6/7	32F01000
05E1 0 0000	BSW3 DC	/0000 BIT SW 3	32F0101 0
05E2 1 05EC	DC	INITL INITIAL ADDRESS	32F01020
05E3 1 05E9	DC	GO LOOP ADDRESS	32F01030
05E4 0 0000	MLSCF DC	/0000 MLSCF 1 TEST BIT SW	32F01040
05E5 0 0000	MLSC2 DC	/0000 MLSCF 2 MODIFY DATA	32F01050
05E6 0 0000	MLSC3 DC	/0000 MLSCF 3 BLANK CARD CHK	32F01060
05E 7 0 0000 05E8 0 FFFF	MLSC4 DC DC	/0000 MLSCF 4 MAIN ROUTINE /FFFF TERM	32F01070 32F01080
0359 0 FFFF	* * * * *	7FFFF	32F01080
	*		32F01100
05E9 00 44800010	GO BSI I	BEGIN MONITOR BEGIN CALL	32F01110
05EB 1 05DC	DC	PID	32F01120
	* :		32F01130
	•		32F01140
	* * * * * *	* * * * * * * * * * * * * * * *	32F01150
	****	INITIALIZATION RTN *****	32F01160
	****	* * * * * * * * * * * * * * * * *	32F01170
0550 0 5555	*	40-0-0	32F01180
05EC 0 0000	INITL DC	/0000 ICTR	32F01190
05ED 01 670005F8		S TEST STORE TEST ADDR	32F01200
05EF 0 6BF4	STX 3	3 MLSCF IN MLSCF 1	32F01210
05F0 01 670006AF	•	BLANK STORE BLANK CARD CHK	32F01220 32F01230
05F2 0 6BF3		3 MLSC3 IN MLSCF 3	32F01240
05F3 00 67000000		3 /0000 CLEAR BLANK FLAG	32F01250
05F5 0 6B50		B BLFLG	32F01260
	*		32F01270
05F6 01 4C8005EC	BSC I	INITL RETURN TO MONITOR	32F01280
- · · · · · · · · · · · · · · · · · · ·			32F01290
	•		32F01300
	****	TEST BIT SWITCH ROUTINE *****	32F01310
	* * * * * *	* * * * * * * * * * * * * * * * *	32F01320
	*		32F01330
05F8 0 COE7	TEST LD	BSW2 LD FUNC 2 SWS	32F01340
05F9 01 4C200606	BSC L	TEST2, Z BR IF SW 2 ENTRY	32F01350

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				32F01360
05FB 00 44800013	BSI	I LOG	LOG ENTER MOD	32F01370
05FD 1 088F	DC	MSGM	NUMBER MESSAGE	32F01380
05FE 1 0601	DC:	TEST1		32F01390
05FF 0 0000	DC	0000		32F01400
0600 0 3000	WAIT		WAIT FOR SW ENTRY	32F01410
	*			32F014 20
0601 01 670005F8		L3 TEST	SET TO CHECK AGAIN	32F01430
0603 0 6BEO	STX	3 MLSCF	FOR SW 2 ENTRY	32F01440
0604 00 4C800011	BSC	I START		32F01450
	*			32F01460
0606 01 4C040618		L TEST3.E	BR IF MOD 7	32F01470
0608 00 67002968		L3 /2968	SET PUNCH MIN	32F01480
060A 01 6F000659		L3 PMIN+1	FOR 10,600 MICRO SEC	32F01490
0600 00 67003818	LDX	L3 /3818	SET PUNCH MAX	32F01500
060E 01 6F00065D		L3 PMAX+1	FOR 14,360 MICRO SEC	32F01510 32F01520
0610 00 6700036B		L3 /036B L3 RMIN+1	SET READ MIN	32F01520 32F01530
0612 01 6F000675			FOR 875 MICRO SEC SET READ MAX	32F01540
0614 00 67030B22 0616 01 6F000679	LDX STX	L3 /0822 L3 RMAX+1	FOR 2850 MICRO SEC	32F01550
0818 01 8F000879	* 317	LO KHMAYI	FUR 2000 MICKU 320	32F01560
0618 00 65000000	•	L1 /0000	RESET ERROR FLAG	32F01570
061A 0C 67000000		L3 /0000	RESET INDEX REG 3	32F01580
0014 00 0100000	*			32F01590
061C 0 COC1	LD	BSWO	LD FUNC O SWS	32F01600
061D 0 1802	SRA	2	SHIFT TO BYPASS BIT	32F01610
361E 0 4804	BSC	E	SKIP IF NO BYPASS BIT	32F01620
061F 0 7101	MDX	1 1	ADD BIT IN ERROR FLAG	32F01630
0620 01 6D0007B5	STX	L1 ERFLG	STORE BYPASS BIT OR CLEAR	32F01640
	* .			32F01650
0622 0 1801	SRA	1	SHIFT TO SINGLE CARD	32F01660
0623 0 4804	BSC	E	SKIP IF NOT SINGLE CD	32F01670
0624 0 7301	MDX	3 1	ADD BIT TO INDEX 3	32F01680
0625 01 6F0007D5	STX	L3 LGFLG	STORE 1/0 IN LOG FLAG	32F01690 32F01 7 00
0627 00 67000000	+ LDX	L3 /0000	LOAD PUNCH DELAY CONST	32F01710
0629 0 1803	SRA	3	SHIFT TO DELAY PCH	32F01720
062A 0 4804	BSC	É	SKIP IF NO DELAY	32F01730
062B 0 6300	LDX	3 0	CLEAR DELAY	32F01740
062C 0 6B18	STX	3 DELAY	STORE CONST/O IN DELAY	32F01750
	*		•	32F01760
062D 01 6700069B	LDX	L3 NDRD	LOAD MODIFY DATA ADDR	32F01770
062F 0 19C1	SR A	1	SHIFT TO MODIFY DATA	32F01780
0630 0 4804	BSC	Ε	SKIP IF NO MODIFY	32F01790
0631 0 6883	STX	3 MLSC2	STORE ADDR/ZERO	32F01800
	*			32F01810
0632 0 COAC	LD	BSW1	LD FUNC 1 SWS	32F01820
0633 01 4C0807E1		L ERR2,+	BRANCH IF NO TEST SW SET	32F01830
0635 01 6700068F	* LDX	L3 FEED	LOAD FEED ADDR	32F01840 32F01850
0637 0 4804	BSC	E	SKIP IF NO FEED	32F01860
0638 0 6BAE	STX	3 MLSC4	STORE FEED ADDR	32F01870
COSC O COAL	*	3 112304	STORE TEED ADDR	32F01880
0639 01 67000673		L3 READ	LOAD READ ADDR	32F01890
0638 0 1801	SRA	1	SHIFT TO READ	32F01900
063C 0 4804	BSC	E	SKIP IF NO. READ	32F01910
063D 0 6BA9	STX	3 MLSC4	STORE READ ADDR	32F01920
	*			32F01930
063E 01 67000654		L3 PUNCH	LOAD PUNCH ADDR	32F01940
0640 0 1801	SRA	1	SHIFT TO PUNCH	32F01950
0641 0 4804	BSC	E	SKIP IF NO PUNCH	32F01960
0642 0 6BA4 .	STX	3 MLSC4	STORE PUNCH ADDR	32F01970
0643 00 40900011	*	I START	RETURN TO MONITOR	32F01980 32F01990
0643 00 40800011	BSC	I START	RETURN TO MONITOR	32F01990 32F02000
0645 0 0000	DELAY DC	/0000		32F02000
0047 0 0000	*	, 5555		32F02020
0646 0 0000	BLFLG DC	/0000	CARD NOT BLANK FLAG	32F02030
		·		

					• .
	*				32F02040
	****		1442 DSW	READY RTN ****	32F02050
	* * * * *	*	* * * * *	* * * * * * * * * * *	32F02060
	*				32F02070
0647 0 0000	READY DC		/0000	ICTR	32F02080
0648 01 0C000780	XIO XIO	L	SNSRY	SENSE DSW	32F02090
064A 01 4C20064E	BSC	Ĺ	NOTRY,Z		32F02100
064C 01 4C800647	BSC	ī	READY	BRANCH II DON NOT LENG	32F02110
064E 00 67002000	NOTRY LDX	_	/2000		32F02120
0650 01 6F0007D5	STX		LGFLG	SET BIT 2 IN LOG FLAG	32F02130
0652 01 4C0007B6	BSC	Ĺ	LG SCN	521 511 2 IN 255 12A5	32F02140
0072 01 40000180	*	-	LUJUN	•	32F02150
	****		START PUNC	H - RTN 3 *****	32F02160
	* * * * *	*	* * * * *	* * * * * * * * * * *	32F02170
	*	•		• • • • • • • • • • • • • • • • • • • •	32F02180
0654 0 40F2	PUNCH BSI		READY	GO TO DSW READY	32F02190
0034 0 4012	*		KEADI	00 10 D3# KEAD!	32F02200
0655 0 COFO	LD		BLFLG	LOAD BLANK CARD FLAG	32F02210
					32F02220
0656 01 4C2007DD	asc •	L	ERR1.Z	BRANCH IF NOT ZERO	32F02230
0459 00 47001494			/1/0/	MOD 7 PUNCH COL MIN	32F02240
0658 00 67001484	PMIN LDX		/14B4 \	MOD 7 PUNCH COL MIN 5300 US	32F02250
065A 01 6F000885	STX	LJ	CLMIN	2300 02	
0/56 00 /7001606	*		(1.000	MOD 7 PUNCH COL MAX	32F02260 32F022 70
065C 00 67001C0C	PMAX LDX		/1COC		
065E 01 6F00087D	STX	LS	CLMAX	7160 US	32F02280
00 00	*		** 003	CTODE OCH DEED DEU E/D	32F02 290 32F02300
0660 00 67004003	LDX		/4003	STORE PCH RESP DSW S/B	
0662 01 6F000865	STX	L3	DSWC+1		32F02310
	*				32F02320
066÷ 01 670006D0	LDX		PCCOL	INT LVL O	32F02330
0666 00 6F000028	STX	L3	ILO	ENTRY	32F02340
	*			·	32F02350
0668 01 67000728	LDX		OPEND	INT LVL 4	32F02360
066A 00 6F000030	STX	L3	ILCRP	ENTRY	32F02370
	• ,				32F02380
066C 00 6700C001	LDX		/0001	STORE RŢN NO 1	32F02390
066E 01 6F0005DD	STX	L3	PID+1		32F02400
	*				32F02410
0670 01 0C000784	XIO	L	STPCH ,	START PUNCH	32F02420
0672 0 704C	MDX		CLEAR ·	GO TO CLEAR	32F02430
	*	`	•		32F02440
	****		START READ	- RTN 2 *****	32F02450
	* * * * *	*	* * * * *		32F02460
					32F02470
0673 0 40D3	READ BSI		READY	GO TO DSW READY	32F02480
	*				32F02490
0674 00 670002BC	RMIN LDX	L3	/02BC	MOD 7 READ COL MIN	32F02500
0676 01 6F000885	STX	L3	CLMIN	700 USEC	32F02510
	*				32F02520
0678 00 67000904	RMAX LDX	L3	/09C4	MOD 7 READ COL MAX	32F02530
067A 01 6F00087D	STX	L3	CLMAX	2500 USEC	32F02540
	*				32F02550
0670 00 67008003	LDX	L3	/8003	STORE COL DSW S/B	32F02560
067E 01 6F000865	STX		DSWC+1		32F025 70
	*		-		32F02580
0680 01 670006DE	LDX	L3	RDCOL	INTERRUPT LVL 0	32F02590
0682 00 6F000028	STX	L3	ILO	ENTRY	32F02600
-	*				32F02610
0684 01 67000728	LDX	L3	OPEND	INT LVL 4	32F02620
0686 00 6F000030	STX		ILCRP	ENTRY	3?F02630
	*				32F02640
0688 00 67000002	LDX	L3	/0002	STORE RTN NO 2	32F02650
068A 01 6F0005DD	` STX		PID+1		32F02660
	*				32F02670
068C 01 0C000782	XIO	L	STRD	START READ	32F02680
068E 0 7030	MDX	-	CLEAR	GO TO CLEAR	32F02690
1000	*			US TO GELAN	32F02700
	****		START FEED	- RTN 3 *****	32F02710
			J 1 LLU		

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

1442 TIMING TEST

DATE EC NO. 02JAN66 415490 01MAY66 415490B

1442	T	IM	IN	G	T	E	S	T
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02JAN66 415490

01MAY66 4154908

							33503770
		* * *	* *	*	* * * * * .		32F02720 32F02730
		# 			05 404	CO TO DELL DEADY	
068F 0	4087	FEED	BSI		READY	GO TO DSW READY	32F02740
	67000715		LDX		FDEND	INT LVL 4	32F02750 32F02760
0692 00	6F000030		STX	LJ	ILCRP	ENTRY	32F02770
0.00	(3000003	*			10003	STORE RTN NO 3	32F02780
	67000003		LDX		/0003	STORE RTN NO 3	32F02790
0999 01	6F0005DD	*	STX	LJ	PID+1		32F02800
0400 01	0000704	•	V 10		CTEN	START FEED	32F02810
	00000786			L	STFD	GO TO CLEAR	32F02820
069A 0	7024	•	MDX		CLEAR	GO TO CLEAR	32F02830
					CTART NEW I	DATA READ - RTN 4 +++++	32F02840
		*****			SIARI NEW I		32F02850
				•			32F02860
0698 0	40AB	NDRD	BSI		READY	GO TO DSW READY	32F028 70
		NUNU		1 2	/8003	STORE RD RESP DSW S/B	32F02880
	67008003		LDX STX			310KL KD KESF DS# 376	32F02890
0945 01	6F000865	*	31X	LJ	DSWC+1		32F02900
0(40.01	(7000450	•	LDX		NDCOL	STORE INTERPUPT LVL 0	32F02910
	670006ED		STX		ILO	ENTRY IN MONITOR	32F02920
UBAZ UU	6F000028	*	317	LJ	100	ENTRY IN HONETON	32F02930
0646 01	6700071D	•	LDX	. 2	NDEND	STORE INTERRUPT LVL 4	32F02940
			STX		ILCRP	ENTRY	32F02950
UBAB UU	6F000030	•	317	LJ	ILUNP	CIVINI	32F02960
0449.00	4.7000004	•	LDX	. 2	/0004	STORE RTN NO 4	32F02970
	67000004		STX		PID+1	STURE RIN NO 4	32F02980 '
ODAA UI	6F0005DD	_	31X	LJ	PIDAI		32F02990
0.10 01	00000702	•	V10		STRD	START READ	32F03000
	00000782			L	CLEAR	GO TO CLEAR	32F03010
OGAE O	7010		MDX		CLEAR	GO TO CLEAR	32F03020
					START CHECK	FOR BLANK CARD - RTN 5 **	
					SIAKI CHECK	TUR BLANK CARD - KIN J ++	32F03040
				•			32F03050
06AF 0	4097	BLANK	BC I		READY	GO TO DSW READY	32F03060
UBAF U	4091	*	631		READI	OU TO DOW READ!	32F03070
0680 01	670006F5		LDX	13	BLCOL	INT LVL O	32F03080
	6F000028		STX		ILO	ENTRY	32F03090
0002 00	0.000020	*	317		120		32F03100
0684 01	67000718	•	LDX	13	BLEND	INT LVL 4	32F03110
	6F000030				ILCRP	ENTRY	32F03120
0000 00	0.00000	*	•••				32F03130
0688 00	67000005		LDX	L 3	/0005	STORE RTN 5	32F03140
	6F0005DD		STX		PID+1		32F03150
	0.00000	*	••••				32F03160
06BC 01	0000782		XIO	L	STRD	START READ	32F03170
06BE 0	7000		MDX	_	CLEAR	GO TO CLEAR	32F03180
		*					32F03190
		****			TIMING LO	OP *****	32F03200
		* * *	* *	*	* * * * *		32F03210
		*					32F03220
068F 00	65000 000	CLEAR	LDX	Ll	/0000	CLEAR ERROR FLAG	32F03230
06C1 00	66000000		LDX	L2	/0000	CLEAR COLUMN COUNT	32F03240
06C3 0	2000	TIMER	LDS		0	CLEAR CARRY	32F03250
0604 0	C807		LDD		CONST	LOAD TIME CONSTANT	32F03260
0605 0	8808	ADD	AD		CONST+2	INCREMENT UNTIL INTRPT	32F03270
0666 0	100A		SLA		10	TEST 4 SEC LIMIT	32F03280
0607 01	4C0207E5		BSC	L	ERR3,C	BRANCH ON CARRY	32F03290
06 C9 0	180A		SRA		10		32F03300
06CA 0	70FA		MDX		ADD		32F03310
		*					32F03320
06CC	0000			Ε	0		32F03330
06CC 0	0000	CONST			/0000		32F03340
06CD 0	012C		DC		/012C	TIMING CONST 300 US	32F03350
06CE 0	0000		DC		/0000		32F03360
06CF 0	0322		DC		/0022	TIMING CONST 34 US	32F03370
							32F03380
		•					32F03390

		* * *	* *	*			32F03400
		****			COLUMN	INTERRUPT - PUNCH *****	32F03410
		* * *	* *	*	* * * *	* * * * * * * * * * * *	32F03420
		*	•	•			32F03430
06D0 0	0000	PCCOL	מכ		/0000	ICTR FROM MON	32F03440
06D1 0	402D		BSI		CMCDL	GO TO COMMON RTN	32F03450
0001 0	4020	*	03.		0.1002		32F03460
0602 01	4C2807E9	•	BSC	L	ERR4,+Z	BRANCH IF DSW ERROR	32F03470
0002 01	40200167	*		-			32F03480
0604 01	67800645	•	LDX	13	DELAY	LOAD PUNCH DELAY AND	32F03490
06D6 0	73FF	DLPCH			-1	DECREMENT UNTIL ZERO	32F03500
0607 0	70FE	DE. 0	MDX	_	DLPCH	THEN SKIP	32F03510
000. 0	10. 5	*			DE. 011		32F03520
0608 01	7401078C		MDX	L	COLPC, 1	INCR PUNCH ADDR	32F03530
	0C00078C		X10	Ĺ	COLPC	PUNCH COLUMN FROM DATA	32F03540
	4C4006C3		BOSC		TIMER	BRANCH OUT OF INT	32F03550
		*		_			32F03560
		****			COLUMN	INTERRUPT - READ *****	32F03570
		* * *	* *	*	* * * *	* * * * * * * * * * * * *	32F03580
		*					32F03590
06DE 0	0000	RDCOL	DC		/0000	ICTR FROM MON	32F03600
06DF 0	401F		BSI		CMCOL	GO TO COMMON RTN	32F03610
		*					32F03620
C6E0 01	4C2807EA		BSC	L	ERR4+1+4	Z BRANCH IF DSW ERROR	32F03630
	OCO0078A		XIO	L	COLRD	READ COLUMN	32F03640
06E4 01	C4000985		LD	L	RDATA		32F036 50
06E6 01	F6000985		EOR	LZ	RDATA	COMPARE WITH DATA TBL	32F03660
06E8 0	1804		SRA		4	SHIFT DUT LAST PUNCH BIT	32F03670
06E9 01	4C2007FB		BSC	L	ERR5,Z	BRANCH IF COMPARE NG	32F03680
06EB 01	4C4006C3		BOSC	L	TIMER	BRANCH OUT OF INT	32F03690
		*					32F03 700
		****			COLUMN	INTERRUPT - MODIFY DATA **	32F03710
		* * *	* *	*	* * * *	* * * * * * * * * * * * *	32F03720
		*					32F03730
06ED 0	0000	NDCOL	DC		/0000	ICTR FROM MON	32F03740
06EE 0	4010		BSI		CMCOL	GO TO COMMON RTN	32F03750
C6EF 01	7401078A		MDX	L	COLRD.1	INCR COLUMN READ ADDR	32F03760
06F1 01	OC 000 78A		XIO	L	COLRD	READ COLUMN INTO DATA	32F03770
06F3 01	4C4006C3		BOSC	L	TIMER	BRANCH OUT OF INT	32F03780
		*					32F03790
		****			COLUMN	INTERRUPT - READ BLANK **	32F03800
		* * *	* *	*	* * * *	* * * * * * * * * * * * * *	32F03810
		*					32F03820
06F5 0	0000	BLCCL		_	/0000		32F03830 32F03840
	00000788		XIO	Ļ	SNCOL	SENSE DSW - RESET	32F03850
	OC00078A		XIO	L	COLRD	READ COLUMN	32F03860
	74000985		MDX	L	RDATA	SKIP IF COLUMN BLANK SET NOT BLANK SW	32F03870
06FC 0	7201 4C4006C3		MDX		1 TIMED	BRANCH OUT OF INT	32F0388 0
OPED OF	46400663	_	BOSC	L	TIMER	DRANCH GUI DE INT	32F03890
		*****			COMMON	COLUMN INTERRUPT RTN ****	32F03900
		* * *		4	* * * *		32F03910
		*	T T	•		* * * * * * * * * * * * * * * * * * * *	32F03920
06FF 0	0000	CMCOL	nc		/0000	ICTR	32F03930
0700 0	7201	CHUUL	MDX	2		INCR COLUMN CTR	32F03940
	CC80006A		LDD	ı	EAQO	LOAD TIME	32F03950
0703 0	1090		SI.T	•	16	EURD TIME	32F03960
	D60009D7		STO	12	TIME	STORE TIMER COUNT	32F03970
3.5. 01		*				The second of th	32F03980
0706 01	0000788		XIO	L	SNCOL	SENSE DSW - RESET RESP	32F03990
	D4000864		STO	Ĺ	DSWC	STORE DSW WAS	32F04000
	F4000865		EOR	ī	DSWC+1	COMPARE	32F04010
	E4000766		AND	L	MASK+1	MASK OUT LAST CARD	32F04020
	4C20080D		BSC	Ĺ	ERR6,Z	BRANCH IF NG	32F04030
		*	-				32F04040
		*				. :	32F04050
0710 01	C4000864	TSTER	LD	L	DSWC	LOAD DSW	32F04060
0712 0	1002		SLA		2	SHIFT ERROR BIT	32F04070

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						•	
713 01	4C8006FF		BSC	1	CMCDL	RETURN TO COL RTN	32F04080
		*					32F04090
		* * *	* *	*	* * * * * *		32F04100
		****			END G? II	NT - FEED *****	32F04110
		* * *	* *	*	* * * * *		32F04120
		*					32F04130
715 0	0000	FDEND	CC		/0000	ICTR FROM MON	32F04140
715 0	0000	FUENU				• • • • • • • • • • • • • • • • • • • •	32F04150
716 0	4029	_	BSI		CMEND	GO TO COMMON RTN	
		*				00 70 004404 540	32F04160
717 0	7020		MDX		BREND	GD TO BRANCH END	32F04170
		*					32F04180
		****			END OP II	NT - BLANK CARD *****	32F04190
		* * *	* *	*	* * * * * *		32F04200
		*					32F04210
718 0	0000	BLEND	DC.		/0000		32F042 20
_	6E000646	522.15	STX	12	BLFLG	STORE BLANK FLAG	32F04230
					CMEND	GO TO COMMON RTN	32F04240
71B 0	4024		BSI		CHEND	SO TO COMMON KIN	32F04250
	7010	*	W6 =		DOCNE		
1C 0	701B	_	MDX		BREND		32F04260
		*					32F04270
		****			END OP II	NT - MODIFY DATA *****	32F04280
		* * *	* *	*	* * * * * *		32F04290
		*			•		32F04300
1D 0	0000	NDEND	DC		/0000	ICTR FROM MONITOR	32F04310
	740809D5		MDX	L	RDATA+80.8		32F04320
01		*		-			32F04330
20 31	C40005DE	•	LD	L	BSWO	MASK OUT MODIFY BIT	32F04340
					A CONTRACTOR OF THE CONTRACTOR	HASK OUT HOUSET DE	32F04350
	E4000765		AND	L	MASK		,
24 Ul	040005DE		STO	L	BSWO .		32F04360
		*					32F04370
26 0	4019		BSI		CMEND	GO TO COMMON RTN	32F04380
		*					32FU4390
27 0	7008		MDX		LDCOL	GO TO COL COUNT CHK	32F04400
		*					32F04410
		****			END OP II	NT - READ AND PUNCH ***	32F04420
		* * *	* *	*	* * * * *	* * * * * * * * * * *	32F04430
		*	. •	-			32F04440
20.0	0000	OBEND	חר		10000	ICTR FROM MONITOR	32F04450
28 0	0000	OPEND			/0000	· · · · · - · · · · · · · · · · ·	
29 0	4016		8 S I		CMEND	GO TO COMMON RTN	32F04460
		*		_			32F04470
2A O	72FF	MAXCK		2	-1	DECREMENT COLUMN COUNT	32F04480
2B 0	7028		MDX		CHK1	SKIP WHEN ZERO	32F04490
		*					32F04500
2C 01	6680088C	MINCK	LDX	12	COLCT	RESTORE COL COUNT	32F04510
		*					32F04520
2E 0	72FF	CLCHK	MDX	2	-1	DECR COL COUNT - SKIP	32F04530
		*		_	•	WHEN COUNT = 1/0	32F04540
2F 0	70.25	-	MUA		CHETM		32F04550
2 F U	702E		MDX		CHKTM	GO TO COL TIME CHECK	
	C	# + c c c c :			501.57	1010 60111111 601117	32F04560
	C400088C	LOCOL		L	COLCT	LOAD COLUMN COUNT	32F04570
	4C080819		BSC	L	ERR8•+	BRANCH IF COUNT = ZERO	32F04580
34 01	9400088D		S	L	BINBO	SUB 80	32F04590
	4C200833		8SC	L	ERR11.Z	BRANCH IF CNT NOT 80	32F04600
		*					32F04610
38 01	67000985	BREND	LDX	L3	RDATA	RESET READ 8 PUNCH ADDR	32F04620
	6F00078A		STX		COLRD		32F04630
	6F00078C		STX		COLPC		32F04640
JC 01	31 000 100	*	317	- 3	CULFU		32F04650
35 2.	40400703	•	0000		EDCCN	SPANCH OUT OF THE	
ot Ul	4040792	_	BOSC	L	ERSCN	BRANCH OUT OF INT	32F04660
		*					32F04670
		****				D OP RTN *****	32F04680
		* * *	* *	*	* * * * * 1		32F04690
		*			•		32F04700
	0000	CMEND	DC		/0000	ICTR '	32F04710
40 0			STX	L2	COLCT	SAVE COLUMN COUNT	32F04720
40 0 41 01	6F00088C						32F04730
	6E00088C	*					
41 01		*	x I O		SNEND	SENSE DOM - DESET DESE	
41 01 43 01	0C000790 D400086C	*	XIO STO	L	SNEND DSWE	SENSE DSW - RESET RESP STORE DSW WAS	32F04740 32F04750

			•				• • • • • • • • • • • • • • • • • • • •	
			*			•		32F04760
747	0	F020	•	EOR		NRDSW	CHK READER NOT READY	32F04770
		4C180769	,	BSC	L	NRDY .+-	BRANCH IF NOT READY	32F04780
			≢.			•		32F04790
		C400086C		LD	L	DSWE	LOAD DSW WAS	32F04800
074C		1003		SLA		3	SHIFT TO LAST CARD	32F04810
740	01	4C280771	_	BSC	L	LSTCD.+Z	BRANCH TO LAST CARD	32F04820 32F04830
174E	01	C400086C	•	LD	L	DSWE	LOAD DSW WAS	32F04840
		F400086D		EOR	Ĺ	DSWE+1	COMPARE	32F04850
		40200815		BSC	ī	ERR7.Z	BRANCH IF NG	32F04860
			*				•	32F04870
755	01	4C800740		BSC	I	CMEND	RETURN TO END OP RTN	32F04880
			*					32F04890
			****				ME CHECK *****	32F04900
			* * *	* *	#	* * * * * *		32F04910
7767	0.1	C400087D	CHK1	LD	L	CLMAX	CHECK HIGHEST COL TIME	32F04920 32F04930
		960009D8	CHKI	S		TIME+1	CHECK HIGHEST COE TIME	32F04940
	_	4C08081D		BSC	L	ERR9.+	BRANCH IF TOO LONG	32F04950
750		70CC		MDX	_	MAXCK	REPEAT FOR NEXT COL	32F04960
			*					32F04970
075E	01	C60009D8	CHKTM	LD	LZ	TIME+1	CHECK HIGHEST COL TIME	32F04980
		94000885		S	L	CLMIN		32F04990
0762	01	4C080828		BSC	L	ERR10,+	BRANCH IF COL TIME	32F05000
	_	7000	*	M0 V		CLCUV	TOO SHORT REPEAT FOR NEXT COL	32F05010
0764	U	7009	•	MDX		CLCHK	REPEAT FOR NEXT COL	32F05020 32F05030
0765	0	FF7F	MASK	DC		/FF7F	MASK BIT B	32F05040
0766		EFFF	HASK	DC		/EFFF	MASK LAST CARD BIT	32F05050
767		FFFB		DC		/FFFB	MASK BIT 13	32F05060
0768		0801	NRDSW	DC		/0801	NOT READY DSW MASK	32F05070
			*					32F05080
			****			NOT READY	ROUTINE ****	32F05090
			* * *	* *	*	* * * * * *		32F05100
240	٥,	4 70007DE	NRDY	LDX	12	LGFLG		32F05110 32F05120
		678007D5 77002000	INKUT	HDX		/2000		32F05120
		6F0007D5		STX		LGFLG	SET BIT 2 IN LOG FLAG	32F05140
	_	4C800740		BSC	ī	CMEND	RETURN TO END OP RTN	32F05150
			*					32F05160
			****			LAST CARD	ROUTINE ****	32F05170
			* * *	* *	*	* * * * *	• • • • • • • • • • •	32F05180
			*			06113		32F05190
	-	C40005DF E0F3	LSTCD		L	BSW1	MASK DUT PUNCH RTN	32F05200
7774		D40005DF		AND Sto	L	MASK+2 BSW1	MASK DUT PUNCH RTN	32F05210 32F05220
J114	01	04000701		3.0	•	D3#1		32F05230
776	01	0000786	•	XIO	L	STFD	FEED OUT LAST CARD	32F05240
			*					32F05250
		678007D5		LDX		LG::LG	ADD BIT 1 TO LOG FLAG	32F05260
		77004000		MDX		/4000		32F05270
377C	01	6F0007D5	_	STX	L3	LGFLG		32F05280
177E	0.1	4C 900740	*	BSC	ı	CMEND	RETURN TO END OP RTN	32F05290 32F05300
JII	O I	4C 800740	*	836	•	CHEND	RETORN TO END OF KIN	32F05310
			*****			IDCC TABLE	F ****	32F05320
			* * *	* *	*	* * * * *		32F05330
								32F05340
780		0000		BSS	E	0		32505350
780	-	0000	SNSRY			/0000		32:05360
781	0	1700	_	DC		/1700		32F05370
	^	0000	# CTDD	00		10000	•	32F05380
0782 0783		0000 1404	STRD	DC DC		/0000 /1404		32F05390 32F05400
	•	1107	*	<i>5</i> 0		, 1707		32F05410
784	0	0000	STPCH	DC		/0000		32F05420
785		1481		DC		/1481		32F05430

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			* .					32F05440
0786	-	0000	STFD	DC		/0000		32F05450
0787	0	1402		DC		/1402		32F05460
			*					32F05470
0788	-	0000	SNCOL			/0000		32F05480
0789	0	1701		DC		/1701		32F05490
			*					32F05500
078A	1	0985	COLRD			RDATA		32F05510
0788	0	1200		DC		/1200		32F055 20
		•	*					32F05530
078C		0985	COLPC			RDATA		32F0554 0
078D	0	1100		DC		/1100		32F05550
			*					32F05560
078E	_	0854	COLER	DC		MSG4+5		32F055 70
078F	0	1200		DC		/1200		32F05580
			*					32F05590
0790	-	0000	SNEND			/0000		32F05600
0791	0	1702		DC		/1702		32F05610
			*					32F05620
			*					32F05630
			****			ERROR LOG	RTN ****	32F05640
			* * *	* *	*	* * * * * *		32F05650
			*					32F05660
0792	00	C4000001	ERSCN	LD	L	1	LOAD INDEX REG 1	32F056 70
0794	C	E820		OR		ERFLG	COMBINE ERROR FLAGS	32F05680
0795	0	001F		STO		ERFLG		32F05690
0796	0	COLE	ERTST	LD		ERFLG		32F05700
0797	01	40040786		BSC	L	LGSCN, E	BRANCH IF BYPASS ERROR	32F05710
			* *					32F05720
0799	01	4C180786		BSC	L	LGSCN++-	BRANCH IF ERROR FLAG	32F05730
			*				IS ZERO	32F05740
079B	01	740107D5		MDX	L	LGFLG,1	ADD BIT TO LOG FLAG	32F05750
0790	0	1001		SLA		1	TEST FOR ERROR BIT	32F05 7 60
079E		D016		STO		ERFLG		32F05 770
079F	01	4C2807A9		BSC	L	ERCAL+Z	BRANCH IF ERROR	32505780
								32F05790
07A1	01	740807AB	ERRET	MDX	L	MSGAD.8	INCR MESSAGE ADDRESS	32F05800
07A3	01	67000796		LDX	L3	ERTST	STORE RETURN ADDR	32F05810
07A5	01	6F0005E4		STX	L3	ML SCF	•	32F05820
07A7	00	4C800011		BSC	I	START	GO TO MONITOR	32F05830
			*					32F05840
07A9		44800012	ERCAL		I	ERROR	MCNITOR ERROR CALL	32F05850
07AB	1	0837	MSGAD			MSG1	MESSAGE ADDRESS	32F05860
	1	O/AF		DC		BUSY	BUSY RETURN	32F05870
07AD	_	0000		DC		/0000		32F05880
07AE	0	70F2 .		MDX		ERRET	NORMAL RETURN	32F05890
			*					32F05900
		670007A9	BUSY	LDX		ERCAL	STORE BUSY RETURN ADDR	32F05910
		6F0005E4		STX		MLSCF		32F05920
0783	00	4C800011		BSC	I	START	RETURN TO MONITOR	32F05930
	_		*					32F05940
0785	0	0000	ERFLG	DC		/0000	ERROR FLAG	32F05950
			*					32F05960
			****		_	END CARD	LOG RTN *****	32F05970
			* * *	* *	*	* * * * * *	*******	32F05980
0701		(7 000007				4501	DECET CALL CONTROL	32F05990
		67000837	LGSCN			MSG1	RESET CALL ADDRESS	32F06000
0788	0	6BF2		STX	3	MSGAD		32F06010
	_	5010	*				TECT 100 E110 517	32F06020
0789		C018		LD		LGFLG	TEST LOG FLAG BIT 1	32F06030
		67000899		LDX	L3	MSGLG	SET LAST CD MESS	32F06040
078C		1001		SLA		1	DRANCH IF LOS DIE	32F06050
0.180	U I	4C2807C8	4	BSC	L	LGCAL++Z	BRANCH IF LOG BIT	32F06060
0705		4 7000004	*			MCCNB	CET MODY MECC	32F06070
		67000894		LDX	LS	MSGNR	SET NRDY MESS	32F06080
07C1		1001		SLA		1	OD TE NODY MESS	32F06090
0762	OI	4C2807C8	•	BSC	L	LGCAL.+Z	BR IF NRDY MESS	32F06100
			-					32F06110

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	SLA	_	1	BRANCH IF ERRORS OR	32F06120
07C5 01 4C2007D6	BSC	L	WTRET,Z	SINGLE CARD BIT	32F06130
	*		AIF W.T	CO TO NEXT	32F06140 32F06150
07C7 0 700F	MDX		NEXT	GO TO NEXT	32F06160
07/10 0 4002	LGCAL STX	2	LGMSG	SET LOG MESS	32F06170
07C8 0 6B02 07C9 00 44800013	BSI	1	LOG	MONITOR LOG CALL	32F06180
07CB 1 0899	LGMSG DC	•	MSGLG	MESSAGE ADDR	32F06190
07CC 1 07CF	2002		LGBSY	BUSY RETURN	32F06200
07CD 0 8000	DC		/8000	RUN SW	32F06210
07CE 0 7007	MDX		WTRET	NORMAL RETURN	32F06220
	•				32F06230
07CF 01 670007C8	LGBSY LDX	L3	LGCAL	STORE BUSY RETURN ADDR	32F06240
07D1 01 6F0005E4	STX	L3	MLSCF		32F06250
07D3 00 4C800011	BSC	I	START	RETURN TO MONITOR	32F06260
					32F06270
07D5 0 0000	LGFLG CC		/0000	LOG FLAG	32F06280
	*	_			32F06290 32F06300
	* * * * *	•	*. * * * * * *		32F06310
0704 0 2001	WTRET WAI	T	1	WAIT FOR OPERATOR TO	32F06320
07D6 0 3001	WIKE HAT	•	•	READY 1442	32F06330
				PRESS PROG START	32F06340
0707 01 67000618	NEXT LDX	L3	TEST3	END OF ROUTINE	32F06350
07D9 01 6F0005E4	STX		MLSCF	GO TO MONITOR	32F06360
07D8 00 4C800011	BSC	1	START	TO TEST FOR NEXT	32F0637.0
	•			CARD	32F06380
	* * * * *	*	* * * * *		32F06390
	• ,				32F06400
	****	_	ERROR ROU	TINES *****	32F06410
	****	-	* * * * * *	• • • • • • • • • • • •	32F06420 32F06430
0700 00 45004000	ERR1 LDX		/4000	PLACE BIT 1 IN ERROR	32F06440
07DD 00 65004000 07DF 01 4C000792	BSC	L	ER SCN	PEACE BIT I IN ERROR	32F06450
0101 01 4000132	*	_	LASCH		32F06460
07E1 00 65002000	ERR2 LDX	L1	/2000	PLACE BIT 2 IN ERROR	32F06470
U/E1 UU B3UUZUUU					
-	BSC	L	ER SCN		32F06480
07E3 01 4C000792		L	ERSCN		32F06480 32F06490
-	BSC		/1000	ADD BIT 3 TO ERROR	32F06490 32F06500
07E3 01 4C000792	BSC ◆			ADD BIT 3 TO ERROR	32F06490 32F06500 32F06510
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792	BSC * ERR3 MDX BSC	L1	/1000 ERSCN		32F06490 32F06500 32F06510 32F06520
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF	BSC ERR3 MDX BSC ERR4 MDX	L1	/1000	DECR COL CTR	32F06490 32F06500 32F06510 32F06520 32F06530
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792	BSC * ERR3 MDX BSC	L1	/1000 ERSCN		32F06490 32F06500 32F06510 32F06520 32F06530 32F06540
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000	BSC ERR3 MDX BSC ERR4 MDX NDP	L1 L	/1000 ERSCN	DECR COL CTR NO DP	32F06490 32F06500 32F06510 32F06520 32F06530 32F06540 32F06550
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E	BSC ERR3 MDX BSC ERR4 MDX NOP XIO	L1 2 L	/1000 ERSCN -1	DECR COL CTR	32F06490 32F06500 32F06510 32F06520 32F06530 32F06540 32F06550 32F06560
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E 07ED 01 C40007B5	BSC ERR3 MDX BSC ERR4 MDX NOP XIO	L1 L	/1000 ERSCN -1 COLER ERFLG	DECR COL CTR NO OP READ COLUMN WAS	32F06490 32F06500 32F06510 32F06520 32F06540 32F06540 32F06550 32F06560 32F06570
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E	BSC ERR3 MDX BSC ERR4 MDX NOP XIO	11 2 1	/1000 ERSCN -1	DECR COL CTR NO DP	32F06490 32F06500 32F06510 32F06520 32F06530 32F06540 32F06550 32F06560
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E 07ED 01 C40007B5 07EF 0 E80A	BSC ERR3 MDX BSC ERR4 MDX NOP XIO LD OR	L1 2 L	/1000 ERSCN -1 COLER ERFLG BIT4	DECR COL CTR NO OP READ COLUMN WAS	32F06490 32F06500 32F06510 32F06520 32F06530 32F06550 32F06550 32F06560 32F06570 32F06580
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E 07ED 01 C4000785 07EF 0 E80A 07F0 01 D4000785	BSC ERR3 MDX BSC ERR4 MDX NDP X10 LD OR ST0	L1 L L L	/1000 ERSCN -1 COLER ERFLG BIT4 ERFLG	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR	32F06490 32F06500 32F06510 32F06520 32F06530 32F06550 32F06550 32F06560 32F06570 32F06570 32F06580 32F06590
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E 07ED 01 C4000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000855 07F6 01 6E000856	BSC ERR3 MDX BSC ERR4 MDX NOP XIO LD OR STO LD STO	L1 L L L L2 L	/1000 ER SCN -1 COLER ERFLG BIT4 ERFLG RDATA MSG4+6 MSG4+7	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT	32F06490 32F06500 32F06510 32F06520 32F06530 32F06540 32F06560 32F06560 32F06570 32F06590 32F06600 32F06610 32F06610
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E 07ED 01 C4000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000855 07F6 01 6E000856 07F8 01 4C4006C3	BSC ERR3 MDX BSC ERR4 MDX NOP XIO LD OR STO LD STO STX BOS	L1 L L L L2 L	/1000 ERSCN -1 COLER ERFLG BIT4 ERFLG RATA MSG4+6 MSG4+7 TIMER	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B	32F06490 32F06500 32F06510 32F06520 32F06530 32F06540 32F06560 32F06570 32F06580 32F06580 32F06600 32F06610 32F06610 32F06630
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E 07ED 01 C4000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000855 07F6 01 6E000856	BSC ERR3 MDX BSC ERR4 MDX NDP XIO LD OR STO LD STO STX BGS BIT4 DC	L1 L L L L2 L	/1000 ER SCN -1 COLER ERFLG BIT4 ERFLG RDATA MSG4+6 MSG4+7	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT	32F06490 32F06500 32F06510 32F06520 32F06540 32F06550 32F06560 32F06570 32F06580 32F06590 32F06610 32F06610 32F06610 32F06630 32F06640
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E 07ED 01 C4000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000855 07F6 01 6E000856 07F8 01 4C4006C3 07FA 0 0800	BSC ERR3 MDX BSC ERR4 MDX NDP XIO LD OR STO LD STO STX BOS BIT4 DC	L1 L2 L L2 L L2 C L	/1000 ERSCN -1 COLER ERFLG BIT4 ERFLG RDATA MSG4+6 MSG4+7 TIMER /0800	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT	32F06490 32F06500 32F06510 32F06520 32F06540 32F06550 32F06560 32F06560 32F06580 32F06590 32F06610 32F06620 32F06630 32F06640 32F06650
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E 07ED 01 C4000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000855 07F6 01 6E000856 07F8 01 4C4006C3 07FA 0 0800	BSC ERR3 MDX BSC ERR4 MDX NOP XIO LD OR STO LD STO STX BOS BIT4 DC ERR5 LD	L1 L L L L2 L	/1000 ERSCN -1 COLER ERFLG BIT4 ERFLG RDATA MSG4+6 MSG4+7 TIMER /0800 ERFLG	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT	32F06490 32F06500 32F06510 32F06520 32F06540 32F06550 32F06560 32F06560 32F06590 32F06690 32F06610 32F06620 32F06630 32F06640 32F06650 32F06660
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E 07ED 01 C4000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000855 07F6 61 6E000856 07F8 01 4C4006C3 07FA 0 0800 07FB 01 C4000785 07FD 0 E80E	BSC ERR3 MDX BSC ERR4 MDX NOP XIO LD OR STO LD STO STX BOS BIT4 DC ERR5 LD OR	11 2 1 1 1 1 2 1 1 1 1 1 1 1	/1000 ERSCN -1 COLER ERFLG BIT4 ERFLG RDATA MSG4+6 MSG4+7 TIMER /0800 ERFLG BIT5	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT	32F06490 32F06500 32F06510 32F06520 32F06530 32F06550 32F06560 32F06570 32F06590 32F06690 32F06610 32F06620 32F06640 32F06650 32F06650 32F06650 32F06650
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E 07ED 01 C4000785 07EF 0 E80A 07F0 01 D4000785 07F4 01 D4000855 07F4 01 D4000855 07F6 G1 6E000856 07F8 01 4C4006C3 07FA 0 0800 07FB 01 C40007B5 07FD 0 E80E 07FE 01 D40007B5	BSC ERR3 MDX BSC ERR4 MDX NOP XIO LD OR STO STX BGS BIT4 DC ERR5 LD OR STO	L1 L2 L2 L L2 L L2 L	/1000 ER SCN -1 COLER ERFLG BIT4 ERFLG RDATA MSG4+6 MSG4+7 TIMER /0800 ERFLG BIT5 ERFLG	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT ADD NIT 5 TO ERROR	32F06490 32F06500 32F06510 32F06520 32F06530 32F06550 32F06560 32F06560 32F06590 32F06690 32F06610 32F06620 32F06640 32F06640 32F06640 32F06640 32F06660 32F06660 32F06660
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000855 07F6 01 6E000856 07F8 01 4C4006C3 07FB 01 C40007B5 07FD 0 E80E 07FE 01 D40007B5 07FE 01 D40007B5	BSC ERR3 MDX BSC ERR4 MDX NDP X10 LD OR STO LD STO STX BOS BIT4 DC ERR5 LD OR STO CR STO LD OR STO STO STO STO STO STO STO STO STO STO	L1 L2 L2 L2 L L2 L L3	/1000 ERSCN -1 COLER ERFLG BIT4 ERFLG RSG4+6 MSG4+6 MSG4+7 TIMER /0800 ERFLG BIT5 ERFLG RDATA	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT	32F06490 32F06500 32F06510 32F06520 32F06530 32F06550 32F06560 32F06570 32F06580 32F06690 32F06690 32F0660 32F0660 32F0660 32F06650 32F06650 32F06650 32F06660 32F06670 32F06670
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C00078E 07ED 01 C4000785 07EF 0 E80A 07F0 01 D4000785 07F4 01 D4000855 07F4 01 D4000855 07F6 G1 6E000856 07F8 01 4C4006C3 07FA 0 0800 07FB 01 C4000785 07FD 0 E80E 07FE 01 D4000785	BSC ERR3 MDX BSC ERR4 MDX NOP XIO LD OR STO STX BGS BIT4 DC ERR5 LD OR STO	L1 L2 L2 L L2 L L3 L3 L3	/1000 ER SCN -1 COLER ERFLG BIT4 ERFLG RDATA MSG4+6 MSG4+7 TIMER /0800 ERFLG BIT5 ERFLG	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT ADD NIT 5 TO ERROR STORE DATA WAS	32F06490 32F06500 32F06510 32F06520 32F06530 32F06550 32F06560 32F06560 32F06590 32F06690 32F06610 32F06620 32F06640 32F06640 32F06640 32F06640 32F06660 32F06660 32F06660
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000856 07F8 01 4C4006C3 07FA 0 0800 07FB 01 C4000785 07FD 0 E80E 07FE 01 D4000785 07FD 0 E80E 07FE 01 D4000785 0800 01 67800985	BSC ERR3 MDX BSC ERR4 MDX NDP XIO LD STO STX BGS BIT4 DC ERR5 LD OR STO LD STO STX STX SGS STX STX STX STX STX STX STX STX STX ST	L1 L2 L2 L2 L L3 L3 L3 L2	/1000 ERSCN -1 COLER ERFLG ERFLG ERFLG RDATA MSG4+6 MSG4+7 TIMER /0800 ERFLG BIT5 ERFLG RDATA MSG5+5	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT ADD NIT 5 TO ERROR STORE DATA WAS	32F06490 32F06500 32F06510 32F06520 32F06530 32F06550 32F06560 32F06560 32F06570 32F06590 32F06690 32F06630 32F06630 32F06640 32F06650 32F06670 32F06670 32F06690 32F06690 32F06690
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000785 07F6 01 6E000856 07F8 01 4C4006C3 07FA 0 0800 07FB 01 C4000785 07FD 0 E80E 07FE 01 D4000785 0800 01 67800985 0802 01 6F00085C 0804 01 C6000985	BSC ERR3 MDX BSC ERR4 MDX NOP XIO LD OR STO LD STO STX BOS BIT4 DC ERR5 LD OR STO LD OR STO LD S	L1 L2 L L2 L L3 L3 L3 L2 L	/1000 ERSCN -1 COLER ERFLG ERFLG ERFLG RDATA MSG4+6 MSG4+7 TIMER /0800 ERFLG BIT5 ERFLG RDATA MSG5+5 RDATA	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT ADD NIT 5 TO ERROR STORE DATA WAS STORE DATA S/B STORE COL COUNT	32F06490 32F06500 32F06520 32F06530 32F06550 32F06550 32F06560 32F06570 32F06590 32F06690 32F06610 32F06620 32F06640 32F06640 32F06670 32F06680 32F06670 32F06690 32F06690 32F06690 32F066700 32F06710
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000785 07F6 01 6E000856 07F8 01 4C4006C3 07FB 01 C4000785 0800 01 67800985 0802 01 6F00085C 0804 01 C6000985 0804 01 C6000985 0808 01 6E00085E 0808 01 6E00085E 0808 01 6E00085E	BSC ERR3 MDX BSC ERR4 MDX NDP X10 LD OR STO LD STO STX BOS BIT4 DC ERR5 LD OR STX LD OR STX BOS STX BOS STX LD STX LD STX LD STX LD STX LD STX LD STX LD STX LD STX LD STX LD STX LD STX LD STX BOS	L1 L L L L L L L L L L L L L L L L L L	/1000 ERSCN -1 COLER ERFLG BIT4 ERFLG RDATA MSG4+6 MSG4+7 TIMER /0800 ERFLG BIT5 ERFLG RDATA MSG5+5 RDATA MSG5+5 RDATA MSG5+6 MSG5+7 TIMER	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT ADD NIT 5 TO ERROR STORE DATA WAS STORE DATA S/B	32F06490 32F06500 32F06510 32F06520 32F06530 32F06550 32F06560 32F06560 32F06590 32F06690 32F06640 32F06640 32F06640 32F06640 32F06640 32F06670 32F06670 32F06710 32F06720 32F06720 32F06730 32F06740
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000855 07F6 01 6E000856 07F8 01 4C4006C3 07FB 01 C4000785 07FD 0 E80E 07FE 01 D4000785 0800 01 67800985 0800 01 67800985 0800 01 67000850 0806 01 D400085D 0808 01 6E00085E	BSC ERR3 MDX BSC ERR4 MDX NOP XIO LD OR STO STX BOS BIT4 DC ERR5 LD OR STO LDX STX LD STO STX STX STO LDX STX STX LD STO STX	L1 L L L L L L L L L L L L L L L L L L	/1000 ERSCN -1 COLER ERFLG BIT4 ERFLG RDATA MSG4+6 MSG4+7 TIMER /0800 ERFLG BIT5 ERFLG RDATA MSG5+5 RDATA MSG5+6 MSG5+7	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT ADD NIT 5 TO ERROR STORE DATA WAS STORE DATA S/B STORE COL COUNT	32F06490 32F06500 32F06510 32F06520 32F06520 32F06550 32F06560 32F06560 32F06580 32F06690 32F06610 32F06630 32F06630 32F06640 32F06670 32F06670 32F06670 32F06710 32F06710 32F06730 32F06730 32F06740 32F06750
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000785 07F6 01 6E000856 07F8 01 4C4006C3 07FB 01 C4000785 07FD 0 E80E 07FF 01 D4000785 0800 01 67800985 0802 01 6F00085C 0804 01 C6000985 0806 01 D400085D 0808 01 6E00085E 0808 01 6E00085E 0808 01 6E00085E 0808 01 6C4006C3	BSC ERR3 MDX BSC ERR4 MDX NOP XIO OR STO LD STO STX BOS BIT4 DC ERR5 LD OR STO LD STO LD STO STX BOS BIT5 DC #	L1 L L L L L L L L L L L L L L L L L L	/1000 ERSCN -1 COLER ERFLG ERFLG RDATA MSG4+6 MSG4+7 TIMER /0800 ERFLG BIT5 ERFLG RDATA MSG5+5 RDATA MSG5+5 RDATA MSG5+6 MSG5+7 TIMER /0400	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT STORE DATA WAS STORE DATA S/B STORE DATA S/B STORE COL COUNT BRANCH OUT	32F06490 32F06500 32F06510 32F06520 32F06530 32F06550 32F06560 32F06560 32F06590 32F06690 32F06600 32F06600 32F06600 32F06600 32F06600 32F06670 32F06690 32F06690 32F06710 32F06720 32F06720 32F06740 32F06740 32F06750 32F06750 32F06760
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000856 07F8 01 4C4006C3 07FA 0 0800 07FB 01 C4000785 07FD 0 E80E 07FF 01 D4000785 0800 01 67800985 0804 01 C6000985 0804 01 C6000985 0806 01 D400085D 0808 01 6E00085E 0808 01 6C400085E 0808 01 6C4000785	BSC ERR3 MDX BSC ERR4 MDX NOP XIO LD OR STO LD STO STX BOS BIT4 DC ERR5 LD OR STO LDX STX BOS BIT5 DC ERR6 LD	L1 L L L L L L L L L L L L L L L L L L	/1000 ERSCN -1 COLER ERFLG BITLG RDATA MSG4+6 MSG4+7 TIMER /0800 ERFLG BIT5 ERFLG RDATA MSG5+5 RDATA MSG5+5 RDATA MSG5+6 MSG5+7 TIMER /0400 ERFLG	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT ADD NIT 5 TO ERROR STORE DATA WAS STORE DATA S/B STORE COL COUNT	32F06490 32F06500 32F06510 32F06520 32F06550 32F06550 32F06550 32F06570 32F06570 32F06690 32F06600 32F06610 32F06640 32F06640 32F06640 32F06640 32F06670 32F06670 32F06700 32F06710 32F06710 32F06770 32F06750 32F06750
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000855 07F6 01 6E000856 07F8 01 4C4006C3 07FB 01 C4000785 0800 01 6780985 0802 01 6F00085C 0804 01 C4000785 0808 01 6E00085E 0808 01 6E00085E 0808 01 6E00085E 0808 01 6E00085E 0808 01 6E00085E 0808 01 6C4000785 0808 01 6C4000785 0800 01 C4000785 0800 01 C4000785	BSC ERR3 MDX BSC ERR4 MDX NOP XIO LD OR STO LD STO LD STX BOS BIT4 DC ERR5 LD OR STX BOS STX BOS STX LD STO LDX STX LD STO LDX STX LD STO LDX STX LD STO LDX STX LD STO STX BOS BIT5 DC ERR6 LD OR	L1 L2 L L2 L L3 L3 L3 L2 L L2 L L2 L L2	/1000 ERSCN -1 COLER ERFLG BIT4 ERFLG RDATA MSG4+6 MSG4+7 TIMER /0800 ERFLG BIT5 ERFLG RDATA MSG5+5 RDATA MSG5+6 MSG5+7 TIMER /0400 ERFLG BIT6	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT STORE DATA WAS STORE DATA S/B STORE DATA S/B STORE COL COUNT BRANCH OUT	32F06490 32F06500 32F06510 32F06520 32F06530 32F06550 32F06560 32F06560 32F06590 32F06690 32F06610 32F06630 32F06640 32F06650 32F06670 32F06670 32F06710 32F06710 32F06740 32F06750 32F06750 32F06750 32F06760
07E3 01 4C000792 07E5 00 75001000 07E7 01 4C000792 07E9 0 72FF 07EA 0 1000 07EB 01 0C000785 07EF 0 E80A 07F0 01 D4000785 07F2 01 C6000985 07F4 01 D4000856 07F8 01 4C4006C3 07FA 0 0800 07FB 01 C4000785 07FD 0 E80E 07FF 01 D4000785 0800 01 67800985 0804 01 C6000985 0804 01 C6000985 0806 01 D400085D 0808 01 6E00085E 0808 01 6C400085E 0808 01 6C4000785	BSC ERR3 MDX BSC ERR4 MDX NOP XIO LD OR STO LD STO STX BOS BIT4 DC ERR5 LD OR STO LDX STX BOS BIT5 DC ERR6 LD	L1 L2 L L2 L L3 L3 L3 L2 L L2 L L2 L L2	/1000 ERSCN -1 COLER ERFLG BITLG RDATA MSG4+6 MSG4+7 TIMER /0800 ERFLG BIT5 ERFLG RDATA MSG5+5 RDATA MSG5+5 RDATA MSG5+6 MSG5+7 TIMER /0400 ERFLG	DECR COL CTR NO OP READ COLUMN WAS ADD BIT 4 TO ERROR STORE DATA S/B STORE COL COUNT BRANCH OUT STORE DATA WAS STORE DATA S/B STORE DATA S/B STORE COL COUNT BRANCH OUT	32F06490 32F06500 32F06510 32F06520 32F06550 32F06550 32F06550 32F06570 32F06570 32F06690 32F06600 32F06610 32F06640 32F06640 32F06640 32F06640 32F06670 32F06670 32F06700 32F06710 32F06710 32F06770 32F06750 32F06750

1442 TIMING TEST

1442 TIMING TEST

						•		
0812 01	4C000710		BSC	L	TSTER	RETURN TO COLUMN RTN	32F06800	
0814 0	0200	BIT6	DC		/0200		32F06810	•
		*					32F06820	
0315 00	75000100	ERR7	MDX	LI	/0100	ADD BIT 7 TO ERROR	32F06830	
	4C800740		BSC	I	CMEND	RETURN TO END OP RTN	32F06840	
		*		•			32F06850	
0819 00	75000080	ERR8	MDX	1.1	/0080	ADD BIT 8 TO ERROR	32F06860	
	40000738	EKKO	BSC		BREND	RETURN TO END	32F06870	
0919 01	40000738	*	B3C	L	DKEND	RETURN TO END	32F06880	
	75000010		404			100 017 0 70 50000		
	75000040	ERR9	MDX		/0040	ADD BIT 9 TO ERROR	32F0689C	
	C60009D8		LD		TIME+1	STORE COL TIME WAS	32F06900	
	D400087C		STO	L	MSG9+5		32F06910	
	7201		MDX	2			32F069 20	
0824 01	6E00087E		STX	L2	MSG9+7	STORE COL COUNT	32F069 30	
0826 01	4C00072C		BSC	L	MINCK	RETURN TO END OP	32F069 40	
		*					32F06 950	
0828 00	75000020	ERR10	MDX	Ll	/0020	ADD BIT 10 TO ERROR	32F0696 0	
082A G1	C60009D8		LD	<u>.</u> 2	TIME+1	STORE COL TIME WAS	32F069 70	
082C 01	D4000884		STO	L	MSG10+5		32F0698 0	
082E 0	7201		MDX	2			32F06990	
	65000886		STX		MSG10+7	STORE COL COUNT	32F07000	
	4C000730		BSC	Ĺ	LDCOL	RETURN TO END OP RTN	32F07010	
0031 01	40000730	*	036	L	LDCGL	RETURN TO END OF KIN	32F07020	
0033 00	75000010	ERR11	404		10010	ADD BIT 11 TO ERROR	32F07030	
	75000010	EKKII			/0010		32F07040	
0835 01	40000738	*	BSC	L	BREND	RETURN TO END	32F070 50	
		****			ERROR MES	SAGES ****		
		*****	* *	_		SAGES ****:		
		* * *	+ +	•	• • • • •		32F07070	
		*			40000		32F07080	
0837 0	0000	MSG1	DC		/0000	WORD COUNT	32F07090	
0838 0	0000		DC		/0000		32F07100	
0839 0	0001		DC		/0001	MSG ID	32/07110	
083A 1	088A		DC		ALPH1	CARD NOT BLANK	32F07120	
083B O	000 0		DC		/0000		32F07130	
083 C O	0 00 0		DC		/0000		32F07140	
083D O	0000		DC		/0000		32F07150	
· 083£ 0	0000		DC		/0000	•	32F07160	
		*					32F07170	
083F O	0000	MSG2	DC		/0000		32F07180	
0840 0	000 0		DC		/000 0		32F07190	
0841 0	0002		DC		/0002		32F0 7 20 0	
08 42 0	003B		DC		AIVD	ALPHA MSG 1 - INVLD	32F0 7210	
0843 0	0050		DC		ASHS	ALPHA MSG - SWS	32F07220	
084 4 0	500 0		DC		/ 000 0		32F0 7230	
08 45 0	0000		DC		/0000		32F07240	
08 46 0	0000		DC		/6000		32F0 7250	
		*					32F0 7260	
384 7 0	0000	MSG3	DC		/0000		32F0 7270	
0848 O	0000		DC		/0000		32F0 7280	
0849 0	0003		DC		/0003		32F07290	
084A O	0041		DC		ANINT	NO INTRPT	32F07300	
084B 0	0000		DC		/0000		32F07310	
034C 0	0000		DC		/0000		32F07320	
084D 0	0000		DC		/000 0		32F07330	
084E 0			DC					
007E U	0000		<i>J</i> C		/0000		32F07340 32F07350	
08/5 0	0003	•	DC		(0003			
084F 0	0003	MSG4	DC		/0003		32F07360	
085 0 0	0000		DC		/0000		32F07370	
0851 0	0004		DC		/0004	- NAS SAR COL	32F07380	
0852 1	OBAA		DC		WSBCL	-WAS, S/B, COL	32F07390	
0853 1	08CA		DC		ALPH4	COLUMN ERROR	32F07400	
0854 0	0000		DC		/0000	WAS	32F07410	
0855 0	0000		DC		/0000	S/B	32F07420	
0856 0	0000	_	DC		/0000	COL COUNT	32F07430	
		*					32F07440	
0857 0	0003	MSG5	DC		/0003		32F07450	•
0858 0	0000		DC.		/0000		32F07460	
0859 0	0005		DC		/0005		32F07470	•
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								_

1442 11111110 1201		• •		
085A 1 08AA	· DC	WSBCL	-WAS,S/B,COL	32F07480
0858 1 08D8	DC .	ALPH5	READ COMPARE	32F07490
085C 0 0000	DC	/0000	WAS	32F07500
085D 0 0000	DC	/0000	S/B	32F07510
085E 0 0000	DC	/0000	COL COUNT	32F07520
0035 0 0000	*	,,,,,,,	332 335	32F07530
085F 0 0002	MSG6 DC	/0002		32F07540
0860 0 0000	DC	/0000		32F07550
0861 0 0006	DC	/0006		32F07560
0862 1 089E	DC	WASSB	WAS - S/B	32F07570
0863 1 08E6	DC	AL PH6	COL DSW	32F07580
0864 0 0000	DSWC DC	/0000	COL DSW WAS	32F07590
0865 0 0000	DC	/0000	S/8	32F07600
0866 0 0000	DC	/0000		32F07610
	•			32F07620
0867 0 0002	MSG7 DC	/0002		32F0 7 63 0
0868 C 0000	DC	/0000		32F07640
0869 0 0007	DC	/0007		32F07650
086A 1 089E	DC	WASSB	WAS - S/B	32F07660
086B 1 08EF	DC	ALPH7	END DSW	32F07670
086C 0 0000	DSWE DC	/0000	END OP DSW WAS	32F07680
0860 0 0600	DC	/08 00	S/8	32F07690
086E 0 0000	DC	/0000		32F0 7700
				32F0 7710
986F 0 0000	MSG8 DC	/0000		32F07720
0870 0 0000	DC	/0000		32F0 7730
0871 0 0008	DC	/0008		32F07 740
0872 l 08F8	DC	ALPH8	NO COLUMN	32F07750
0873 0 0044	DC	AINT	INTRPT	32F07760
0874 0 0000	DC	/000 0		32F0/770
0875 0 0000	DC	/0000		32F07780
0376 0 0000	DC	/0000		32F07790
	*			32F07800
08 77 0 0003	MSG9 DC	/0003		32F07810
087 8 0 0000	DC .	/000C		32F07820
0879 0 0009	DC	/0009		32F07830
087A 1 08AA	DC	WSBCL	-WAS, S/B, COL	32F07840
0878 1 0902	CC	ALPH9	COL TIME LONG	32F07850
087C 0 0000	CC	/0000	COL TIME WAS	32F07860
C87D 0 0000	CLMAX DC	/0000	COL TIME MAX	32F07870
087E 0 0000	DC	/0000	COL COUNT	32F07880 32F07890
	*	40003		32F07890
087F 0 0003	MSG10 DC	/0003		32F07910
0880 0 0000	DC	/0000		32F07920
0881 0 0010	DC	/0010	1145 C49 CO1	32F07930
0882 1 08AA	DC ·	WSBCL	-WAS,S/B,COL	32F07940
0883 1 0911	DC	ALP10	COL TIME SHORT COL TIME WAS	32F07950
0884 0 0000	CLMIN DC	/0000	COL TIME WAS COL TIME MIN	32F07960
0885 0 0000	DC DC	/0000 /0000	COL COUNT	32F07970
0886 0 0000	*	70500	COE COOM!	32F07980
0007 0 0003		/0002		32F07990
0887 0 0002	MSG11 DC DC	/0002		32F08000
0888 0 0000	DC	/0011		32F08010
0889 0 0011 · 0884 1 089E	DC	WASSB	WAS - S/B	32F08020
088B 1 0921	DC	ALP11	COL CNT	32F08030
088C 0 0000	COLCT DC	/0000	COLUMN COUNT WAS	32F08040
088D 0 0050	BINBO DC	/0050	S/B	32F08050
088E 0 0000	23	/0000	J, U	32F08060
- JULE 0 0000	*	,		32F08070
088F 0 0000	MSGM DC	/0000		32F08080
0890 0 0000	DC	/0000		32F08090
0891 0 0001	DC	/0001		32F08100
0892 1 094D	DC	AL PHM	ENTER MOD NUMBER 6/7	32F08110
0893 0 0000	DC	70000		32F08120
20/2 0 0000	*		•	32F08130
0894 0 0000	MSGNR DC	/0000		32F08140
0895 0 0000	DC	/0000		32F08150

IBM MAI	NTENANCE	DIAGNOSTIC	PROGE	RAM FOR THE	1130 S	YSTEM		PART NO. Page	2191228 . 7			IBM MA	INTENANCE	DIAGNOSTIC PRO	GRAM FOR TH	IE 1130 S1	YSTEM
1442 TI	MING TEST		*		•							1442 T	IMING TEST	ī			
													:				
0 898			DC	/0C02				32F08160			l	08D1 0		DC	/3600	E	
0897 1	092C		DC	AL PHN	NOT	READY - PRESS	START		• •		-	08D2 0 08D3 0		2C 20	/6200 /6200	K.	
0 898	0000	•	DC	/0000				32F08180 32F08190				08D4 0		DC	/5200	ô	
0899 0	0000	MSGLG	DC.	/0000				32F08200				0805 0		DC	/6200	Ř	
089A 0		HOULU	DC	/0000				32F08210			1 .	08D6 0		DC	/0300	LINE	FEED
089B 0			DC	/0003				32F08220				08D 7 0	FFFF	DC	/FFFF		
089C 1			DC	ALPLG	LAST	CARD , LOAD	PCHED	32F08230			- -			•		_	
		*				CARDS + START		32F08240				08D8 0		ALPH5 DC	/6200	R E	
089D 0	0000		DC	/0000				32F08250				08D9 0 08DA 0		DC DC	/3600 /3E00	Ā	
		*****		ALPHA ME	CCACEC		****	32F08260 32F082 70				08DB 0		DC	/3200	â	•
	•		* * *			* * * * * * *		32F08280				08DC 0		DC	/2100	<u> </u>	
		*	, , ,					32F08290				08DD 0		DC	/1E00	С	
089E 0	8400	WASSB	DC	/8400	-			32F0830 0				08DE 0		DC	/5200	0	
089F 0	2100		DC	/2100				32F08310			!	08DF 0		DC	/7200	M	
0 0A80			DC	/9200	W			32F08320			; .	08E0 0		20	/5600 /3E00	P	
08A1 0			DC	/3E00	Å			32F08330			i	08E1 0 08E2 0		DC DC	~ /6200	â	
08A2 0			DC DC	/9A00 /8000	3			32F08340 32F08350				08E3 0		DC	/3600	Ë	
08A3 0			DC	/9A00	Š			32F08360			į	08E4 0		. DC	/0300	LINE	FEED
08A5 0	BCOO		DC	/BC00	. /			32F08370				08E5 0		DC	/FFFF		
08A6 0			DC	/1A00	8			32F08380						*		_	
0 7A80	2100		DC	/2100				32F08390				08E6 0		ALPH6 DC	/1E00	C	
0 8A8 0			DC	/8400	· -			32F08400			:	08E7 0		DC	/520C	0	
0849 0	FFF F		DC	/FFF F				32F08410			;	08E8 0		DC DC	/5E00 /2100	L	•
	9400	∵ ‡	nc.	19400	· · · · _		•	32F08420 32F08430				08E9 0 08EA 0		DC	/3200	D	
08AA 0		WSBCL	DC	/8400 /2100	<u> </u>		•	32F08440				08EB 0		DC	/9A00	Š	
08AC 0			DC	/9200	. •			32F08450				08EC 0		DC	/9200	H	
0 QA80			DC	/3E00	Ä			32F08460				08ED 0		DC	/0300	LINE	FEED
OBAE O			DC	/9A00	: S			32F08470			-	08EE 0	FFFF	DC	/FFF F		
O PABO	8000		DC	/8000	•			32F08480					_1			_	
0880 0			DC .	/9A00	S			32F08490			i	08EF 0		ALPH7 DC	/3600	E	
08B1 0			DC	/BC00				32F08500			:	08F0 0 08F1 0		DC DC	/7600 /3200	N D	
0882 0 0883 0			DC DC	/1A00 /8000				32F08510 32F08520		`	į.	08F2 0		DC	/2100	•	
08B4 0			DC	/1E00	Ž			32F08530				08F3 0		DC	/3200	D	
0885 0			DC	/520 0	ŏ			32F08540				08F4 0		DC	/9A00	S	
0886 0			DC	/5E00	L			32F08550			:	08F5 0	9200	DC	/9200	W	
08B7 0	2100		DC	/2100				32F08560				08F6 0		DC	/0300	LINE	FEED
0888 O			DC	/8400	-			32F08570				08F7 0	FFFF	DC	/FFFF		
0889 0	FFFF		DC	/FFFF				32F08580				0050 0	74.00	# ALPH8 DC	/7400	•	
0004 0	1500	* A1 D111	00	41500				32F08590				08F8 0 .08F9 0		DC DC	/7600 /5200	N. O	
0888 0		ALPH1		/1E00 /3E00	C			32F08600 32F08610				08FA 0		DC	/2100	U	
0888 0 088 C 0			DC DC	/3E00 /6200	R			32F08610 32F08620				08FB 0		DC	/1E00	E	
08BD 0			DC	/3200	Ď			32F08630				08FC 0		DC	/5200	ŏ	
08BE 0			DC	/2100	-			32F08640				08FD 0	5E00	DC	/5E00	L	
088F 0	7600		DC .	/7600	N			32F08650				08FE 0		DC	/B200	U	
0800 0			DC	/5200	. 0			32F08660				08FF 0		DC	/7200	ĸ	
08C1 0			DC	/9E00	T			32F08670				0900 0		DC	/7600 /EEEE	N	
0802 0			DC	/2100	ρ.			32F08680 32F08690			-	0901 0	FFFF	DC .	/FFFF		
08C4 0			DC DC	/1A00 /5E00	ı			32F08700				0902 0	1E00	ALPH9 DC	/1800	С	
08C5 0			DC	/3E00	Ā			32F08710				0903 0		DC	/5200	ŏ	
0806 0			DC	/7600	Ñ			32F08720			•	0904 0		DC	/5E00	Ĺ	
0807 0			DC	/5A00	K			32F08730				0905 0		DC	/2100		
0808	0300		DC	/0300	LINE	FEED		32F08740				0906 0		DC	/9E00	Ţ	
0809 0	FFFF	_	DC	/FFFF				32F08750				0907 0		DC	/2200	I .	
	1500	*	0.0	11.50-	_			32F08760				0908 0		DC	/7200	, M	
08CA 0		ALPH4		/1E00	C			32F08770				0909 0 090A 0		DC DC	/3600 /2100	E	
08CB 0			DC DC	/5200 /5E00	0			32F08780 32F08 7 90				090B 0		DC	/2100 /5E00		
0 0 08CD			DC	/B200	į.			32F08800				0900 0		DC	/5200	Ď	
08CE 0			DC	/7200	M			32F08810			••	0900 0		DC	/7600	Ň	
08CF 0			DC	/7600	N			32F08820				090E 0		DC	/1600	Ğ	
				/2100				32F08830				090F 0	0300	DC	/0300		FEED

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32F08840 32F08850 32F08860

32F08870 32F08880 32F08890 32F08900 32F08910 32F08920 32F08930 32F08940 32F08950 32F08960 32F08980 32F08999 32F09000 32F09010 32F09030 32F09030 32F09040 32F09050 32F09060 32F09070 32F09080 32F09090 32F09100 32F09110 32F09120 32F09130 32F09140 32F09150 32F09160 32F09170 32F09180 32F09190 32F09200 32F09210 32F09220 32F09230 32FG9240 32F09250 32F09260 32F09280 32F09290 32F09300 32F09310 32F09320 32F09330 32F09340 32F09350 32F09360 32F09370 32F09380 32F09390 32F09400 32F09410 32F09420 3?F09430 32F09440 32F09450 32F09460 32F09470 32F09490 32F09490 32F09500 32F09510

IBM MAINTENANCE DI	AGNOSTIC PROG	RAM FOR THE	1130 SYSTEM	PART NO.	2191228 8	IBM MAI	INTENANCE DIAGN	OSTIC PROGR	RAM FOR THE I	1130 SYSTEM	PART NO. PAGE	2191228 8A
1442 TIMING TEST				PAGE 1		1442 TI	MING TEST					
1442 TIMING TEST												
			•			094F 0	9500	DC	/9E00	7	32F10200	
0910 0 FFFF	DC	/FFFF		32F09520		0950 0		DC	/3600	Ė	32F10210	
0911 0 1E00	ALP10 DC	/1E00		32F09530 32F09540	•	0951 0		DC	/6200 ·	R	32F10220	ŕ
0912 0 5200	DC	/5200	Õ	32F09550		0952 0		DC	/2100	•	32F10230 32F10240	
0913 0 5E00	DC	/5E00	L	32F09560	•	0953 0 0954 0		DC DC	/7200 /5200	. H	32F10250	
0914 0 2100	DC	/2100	· _	32F09570		0955 0		DC	/3200	Ď	32F10260	
0915 0 9E00 0916 0 2200	DC DC	/9E00 /2200	. 1	32F09580 32F09590		0956 0		DC	/2100	•	32F10270	
0917 0 7200	DC	/7200	M	32F09600		0957 0		DC	/7600	N	32F10280	
0918 0 3600	DC	/3600	E	32F09610		0958 0		DC DC	/B200 / 7 200	<u>u</u>	32F10290 32F10300	
0919 0 2100	DC	/2100	_	32F09620		0959 0 095 A 0		DC	/1A00	В	32F10310	
091A 0 9A00	DC	/9A00	2	32F09630 32F09640		0958 0		DC	/3600	Ē.	32F10320	
0918 0 2600 091C 0 5200	DC DC	/2600 /5200	n fi	32F09650		095C 0		DC	/6200	R	32F10330	
091D 0 6200	DC	/6200	Ř	32F09660		0950 0		DC	/0300	LINE FEED	32F10340 32F10350	•
091E 0 9E00	DC	/9E00	T	32F096 70		095E 0	rrrr	DC	/FFFF		32F10360	
091F 0 0300	DC	/0300	LINE FEED	32F09680		095F 0	5E00 A	LPLG DC	/5E00	L	32F10370	
0920 0 FFFF	DC *	/FFFF		32F09690 32F09700		0960 0	3E 00	DC	/3E00	A	32F10380	
0921 0 1E00	ALP11 DC	/1E00	С	32F09710		0961 0		DC	/9A00	Ş	32F10390	
0922 0 5200	DC	/5200	0	32F09720		0962 0 0963 0		DC DC	/9E00 /2100	•	32F10400 32F10410	
0923 0 5E00	DC	/5E00	L	32F09730		0964 0		DC	/1E00	С	32F10420	
0924 0 2100 0925 0 1E00	DC DC	/2100 /1E00	r	32F09 740 32F0 9750		0965 0		DC	/3E00	A	32F10430	
0926 0 5200	DC	/5200	Õ	32F09 7 60		0966 0		DC	/6200	R	32F10440	
0927 0 B200	DC	/B200	Ū	⁻ 32F09 770		0967 0		DC DC	/3200 /2100	D	32F10450 32F10460	-
0928 0 7600	DC	/7600	Ň	32F09780		0968 0 0969 0		DC	/8200		32F10470	
0929 0 9E00 092A 0 0300	DC DC	/9E00 /0300	T Line Feed	32F09 7 90 32F0980 0		096A 0		DC	/2100	•	32F10480	
0928 0 FFFF	DC	/FFFF	CINC LEED	32F09810		0968 0		DC	/5E00	Ĺ	32F10490	
, , , , , , , , , , , , , , , , , , ,	*	••••		32F09820	· s	096C 0		DC	/5200 /3500	0	32F10500 32F10510	
	*			32F09830	•	096D 0 096E 0		DC DC	/3E00 /3200	Ô	32F10520	
0920 0 6200	ALPHN DC	/6200 /3300	R D	32F0984 0 32F0985 0		096F 0		οc	/2100		32F10530	
0920 0 3200 092E 0 6200	DC DC	/3200 /6200	R	32509860		0970 0	5600	DC	/5600	P	32F10540	
092F 0 2100	οc	/2100	•••	32F098 70		0971 0		DC	/1E00	C .	32F10550	
0930 0 3200	DC	/3200	D	32F09880		0972 0 0973 0		DC DC	/2600 /3600	H	32F10560 32F10570	
0931 0 9A00	DC	/9A00	S	32F09890		0974 0		DC	/3200	Ď	32F10580	
0932 0 9200 0933 0 2100	DC DC	/920 0 /2100		32F09900 32F09 910		0975 0		DC	/2100		32F10590	
0934 0 7600	DC	/7600	N	32F0992 0		0976 0		DC	/1E00	C	32F10600	
0935 0 5200	DC	/5200	0	32F09930		0977 0 0978 0		DC DC	/3E00 /6200	A	32F10610 32F10620	
0936 0 9E00	DC DC	/9E00 /2100	τ .	32F099 40 32F0995 0		0979 0		DC	/3200	D	32F10630	
0937 0 2100 0938 0 6200	DC	/6200	R	32F09960		097A 0	9400	DC	/9A00	S	32F10640	
0939 0 3600	DC	/3600	E	32F09970		097B 0		DC	/2100		32F10650	
093A 0 3E00	DC	/3E00	A	32F09980		097C 0 097D 0		DC DC	/4400 /2100	•	32F10660 32F10670	
0938 0 3200	DC DC	/320 0 /A600	D Y	32F0999 0 32F10000		097E 0		DC	/9A00	S	32F10680	
093 C 0 A600 093 D 0 2100	DC	/2100	•	32F10000 32F10010		097F 0	9E00	DC	/9E00	T	32F10690	
093E 0 8400	DC	/8400	-	32F10020	-	0980 0		DC	/3E00	A	32F10700	
093F 0 2100	DC	/2100		32F10030		0981 0 0982 0		DC DC	/¿200 /9E00	K T	32F10710 32F10720	
0940 0 5600	DC	/560 0	P	32F10040	~	0983 0		DC	/0300	LINE FEED	32F10730	
0941 0 6200 0942 0 3600	DC DC	/6200 /3600	F	32F10050 32F10060		0984 0		DC	/FFFF		32F10740	
0943 0 9400	DC	/9A00	Š	32F10070			*	•			32F10750	
0944 0 9A00	DC	/9AGO	S	32F10080	•			****	DATA TABLE	= C	32F10760 32F10770	
0945 0 2100	DC	/2100	•	32F10090				***** !	PAIR IADLE		32F10770	
0946 0 9A00 0947 0 9E00	DC DC	/9A00 /9E00	5 T	32F10100 32F10110		0985 0	0000 R	DATA DC	/0000	CURRENT DATA READ	32F10790	
0947 0 9E00 0948 0 3E00	DC	/3E00	Ä	32F10110 32F10120			*				32F10800	
0949 0 6200	DC	/6200	R	32F10130		0986 0		DC DC	/8000 /C000	DATA TBL COLUMN 1	32F10810	
094A 0 9E00	DC	/9E00	1	32F10140		0987 0 0988 0		DC DC	/C 000 /E000		32F10820 32F10830	
0948 0 0300 094C 0 FFFF	DC DC	/0300 /FFFF	LINE FEED	32F10150 32F10160		0989 0		DC	/F000		32F10840	
UTTO U FFFF	*	/ F T F		32F10180 32F10170	•	098A 0	7800	DC.	/7800		32F10850	
094D 0 3600	ALPHM DC	/3600	E	32F10180		098B 0		DC	/3C00		32F10860	
094£ 0 7600	DC	/7600	N	32F10190	· · · · · · · · · · · · · · · · · · ·	098C 0	1500	DC	/1E00		32F10870	
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1442 TI	MING TEST					•		
098D 0	0F00		DC DC	/0F00			32F10880 32F10890	
098E 0 098F 0	0780 03C 0		DC	/0780 /03C0	COL 10		32F10890	
0990 0	01E0		DC	/01E0			32F10910	
0991 0	00F0		DC	/00F0			32F10920	
0992 0 0993 0	0070 0030		DC DC	/0070 /0030			32F10930 32F10940	
0994 0	0010		DC	/0010			32F10950	
0995 0	8000		DC	/8000			32F10960	
0996 0	C000		DC DC	/C000 /E000			32F10970 32F10980	
0997 0 0998 0	E000 F000		DC	/F000			32F10990	
0999 0	7800		DC	/7800	COL 20		32F11000	
099A 0	3000		DC	/3C00			32F11010	
0998 0 099C 0	1E00 0F00		DC DC	/1E00 /0F00			32F11020 32F11030	
0990 0	0780		DC	/0780			32F11040	
099E 0	03C0		DC	/03C0			32F11050	
099F 0	01E0		DC	/01E0			32F11060	
09A0 0	00F0 0070		DC DC	/00F0 /0070			32F11070 32F11080	
09A2 0	0030		DC	/0030			32F11090	
09A3 0	0010		DC	/0010	COL 30		32F11100	
09A4 0	FFFO		DC	/FFF0			32F11110	
09A5 0	FFF0		DC DC	/FFF0 /0010			32F11120 32F11130	
09AF 0	001 0 003 0		DC	/0030			32F11140	
09A8 0	6076		DC .	- /0070			32F11150	
0 PAF0	00F0		DC	/ /00F0			32F11160	
09AA 0	01E0		DC DC	/01E0 /03C0			32F11170 32F11180	
09AB 0	03C0 0780		DC	/0780			32F11190	
09AD 0	0F00		DC	/0F00	COL 40		32F11200	
OPAE O	1E00		DC	/1E00			32F11210	
09AF 0 09B0 0	3C00 7800		DC DC	/3C00 /7800			32F11220 32F11230	
09B1 0	F000		DC	/F00 0			32F11240	
09B2 0	E000		DC	/E000			32F11250	
0983 0	C000		DC	/C 000			32F11260	,
0984 0 0985 0	8000 0010		DC	/8000 /0010			32F11270 32F11280	
0986 0	0030		DC	/0030			32F11290	
09B 7 0	0070		DC	/0070	COL 50		32F11300	
0988 0	00F0		DC	/00F0			32F11310	
098 9 0 098 A 0	01E0 03C0		DC DC	/01E0 /03C0			32F11320 32F11330	
09BB 0	0780		DC	/0780			32F11340	
09BC 0	0F0 0		DC ·	/0F00			32F11350	
09BD 0	1E00		DC	/1E00			32F11360	
098E - 0 098 F 0	3C00 7800		סכ DC	/3C00 /7800			32F11370 32F11380	
0960 0	F000		DC	/F000			32F11390	
0901 0	E000		DC	/E000	COL 60		32F11400	
0902 0	C000		DC	/C000			32F11410 32F11420	
09 C3 0 09 C4 0	8000 7ff0		DC DC	/8000 /7 FF0			32F11420	
0905 0	BFFO		DC	/BFF0			32F11440	
0906 0	DFFO		DC	/DFF0			32F11450	
0907 0	EFFO		DC	/EFF0 /E7E0			32F11460 32F11470	
09C8 0 C9C9 0	F7F0 FBF0		DC DC	/F7F0 /FBF0			32F11470 32F11480	
09CA 0	FDF0		DC	/FDF0			32F11490	
09CB 0	FEF0		DC	/FEF0	COL 70		32F11500	
0900	FF70		DC	/FF70			32F11510	
09CD 0	FFB0		DC DC	/FFBO /FFDO			32F11520 32F11530	
09CE 0	FFDO FFEO		DC	/FFEO			32F11546	•
	FFCO		DC	/FFC0			32F11550	

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1442 TI	MING TEST								:
09D1 0	FF30		DC	/FF30				32F11560	
09D2 0	FCFO		DC	/FCF0				32F11570	
0903 0	F3F0		DC	/F3F0				32F11580	
09D4 0	CFFO		DC	/CFF0				32F11590	
0905 0	3FF8		DC	/3FF8	COL 80			32F11600	
0906 0	FFFF		מכ	/FFFF				32F11610	
09D7 C	A000	TIME	DC	/000A	START OF	TIME	TABLE	32F11620	
09D8	0051		BSS	81				32F11630	
		*						32F11640	
OA2A	05E9		END	GO				32F11650	

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1442 TIMING TEST

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1442 TIMING TEST

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CROSS REFERENCE LISTING
                   REFERENCES
                   O6CA
ADSCT
                   05DC
        0058
AEND
        0037
                   05DC
                  05DC,0873
AINT
        0044
AIVD
        003B
                   05DC,0842
MLD.
        003E
                   05DC
                   0892
ALPHM
        094D
ALPHN
        092C
                   C897
ALPH1
        0884
                  0834
        08CA
                  0853
ALPH4
ALPH5
        0808
                  085B
ALPH6
        08E6
                   0863
ALPH7
        08EF
                  086B
        08F8
                  0872
AL PH8
        0902
                  087B
ALPH9
                  089C
ALPLG
        095F
ALP10
        0911
                   0883
ALP11
        0921
                  0888
                  05DC, C84A
ANINT
        0041
                  05DC
ANRDY
        004B
AQ5A
        0019
ARDY
        004C
                   05DC
ASB
        0054
                  05DC
                  05DC
ASCT
        005A
                  05DC,0843
ASWS
        0050
                  USDC
AWAS
        0060
BEGIN
        0010
                   05DC,05E9
        088D
                   0734
BIN80
        07FA
                  07EF
BIT4
        080C
                  07FD
BIT5
                  0806
BIT6
        0814
BLANK
        06AF
                   05F0
BLCOL
        06F5
                   0680
BLEND
        0718
                  0684
                  05F5,C655,0719
BLFLG
        0646
                  0717,C71C,C81B,0835
BREND
        0738
                  0610,0720,0724
BSWO
        05DE
BS₩1
        05DF
                  0632,0771,0774
BSW2
        05E0
BSW3
        05E1
                  07AC
BUSY
        07AF
CHKTM
        075E
                  072F
CHK1
        0757
                  0728
CLCHK
        072E
                  0672,068E,069A,06AE,06BE
CLEAR
        06BF
                  065E,067A,0757
CLMAX
        087D
CLMIN
                  C65A,C676,C760
        0885
                  06D1,06DF,06EE,0713
CMCOL
        06FF
                  0716,C718,0726,0729,0755,076F,077E,0817
CMEND
        0740
COLCT
        088C
                  0720,0730,0741
COLER
        078E
                  07EB
                  06D8,06DA,C73C
COLPC
        078C
                  06E2,06EF,06F1,06F8,073A
COLRD
        078A
CONST
        0600
                  0604,0605
DELAY
        0645
                  062C,06D4
DLPCH
        06D6
                  06D7
                  0662,067E,069E,0708,070A,0710
DSWC
        0864
                  0745,074A,C74F,0751
DSWE
        086C
EAQO
        006A
                  0701
END
        0015
                  05DC
ERCAL
        07A9
                  0620,0794,C795,0796-079E,07ED,07F0,07FB,07FE,080D,
        0785
ERFLG
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0810

07AE

05DC,07A9

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FRRET

ERROR

EC NO.

07A1

0012

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ERR1
        07DD
                  0656
ERR10
        0928
                  0762
ERR11
                   0736
                   C633
ERR2
        07E1
ERR3
                   06C7
        07E5
FRR4
        07E9
                   06D2,06E0
FRR5
        07FB
                   06E9
ERR6
        080D
                   C70E
ERR7
                   0753
        0815
                  0732
ERR8
        0819
ERR9
        081D
                  075B
                  073E,07DF,C7E3,07E7
ERSCN
        0792
ERTST
        0796
                  07A3
ETRAP
                   05DC
FDEND
        0715
                  0690
FEED
        068F
                  0635
                  05E3,0A29
GO
        05E9
HALT
        0014
                   05DC
ILCRP
        0030
                   05DC,066A,0686,0692,06A6,06B6
                   O5DC
ILIR
        0036
                  05DC
ILPAT
        0032
                  05DC,0666,0682,06A2,06B2
ILO
        0028
                  O5DC
ILI
        0029
IL2
        002A
                   C5DC
        002B
                   05DC
IL3
                   05DC
        002C
IL4
                  05E2,05F6
0727,0831
INITL
        05EC
        0730
LDCOL
LGBSY
        07CF
                   07CC
        07C8
                   078D,07C2,07CF
LGCAL
                   0625,0650,0769,076D,0778,077C,079B,07B9
LGFLG
        07D5
LGMSG
        07CB
                  07C8
                  0652,0797,0799
LGSCN
        0786
                   05DC,05FB,G7C9
        0013
LOGBY
        0016
                   05DC
        0771
                   0749
LSTCD
                   0700,0722,0773
MASK
        0765
                  075D
MAXCK
        072A
MINCK
        072C
                   0826
MLSCF
        05E4
                   05EF,0603,07A5,07B1,07D1,07D9
        05E5
                   0631
MLSC2
MLSC3
                  05F2
        05E6
                   0638,0630,0642
MLSC4
        05E7
MSGAD
        07AB
                   C7A1.07B8
                  078A,07CB
MSGLG
        0899
MSGM
                   05FD
                   078F
MSGNR
        0894
MSG1
        0837
                  07AB, 07B6
                   C82C,082F
MSG10
        087F
MSG11
        0887
        083F
MSG3
        0847
MSG4
        084F
                   078E, C7F4, C7F6
                   0802,0806,0808
MSG5
        0857
        085F
MSG6
MSG7
        0867
MSG8
        086F
        0877
MSG9
                   0821,0824
NDCOL
        06ED
                   06A0
NDEND
        071D
                   06A4
NDRD
                   062D
        069B
NEXT
        07D7
                   0707
NOTRY
                   C64A
        064E
                   0747
NRDSW
        0768
NRDY
        0769
                   0748
OPEND
        0728
                   0662,0684
PCCOL
        06D0
                   0664
                   05EB,066E,068A,0696,06AA,06BA
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1442 TIMING TEST

PMIN 0658 060A PUNCH 0654 063E RDATA 0985 06E4,06E6,C6FA,071E,0738,078A,078C,07F2,0800,0804 RDCOL 06DE 0680 READ 0673 0639 READY 0647 064C,0654,0673,068F,0698,06AF RMAX 0678 0616 RMIN 0674 0612 RQKB 0034 05DC RQTY 0033 C5DC RSTKB 0017 05DC SNCUL 078B 06F6,0706 SNEND 0790 0743 SNSRY 0780 0648 START 0011 05DC,0604,0643,07A7,07B3,07D3,07DB STFD 0786 0698,0776 STPCH 0784 0670 STRD 0722 068C,06AC,06BC SVKB 0035 05DC TEST 05F8 05ED,0601 TEST1 0601 05FE TEST2 0606 05F9 TEST3 0618 0606,07D7 TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06DC,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882	PMAX	065C	060E
PUNCH 0654 063E RDATA 0985 06E4,06E6,C6FA,071E,0738,078A,078C,07F2,0800,0804 RDCOL 06DE 0680 READ 0673 0639 READY 0647 064C,0654,0673,068F,0698,06AF RMAX 0678 0616 RMIN 0674 0612 RQKB 0034 05DC RQTY 0033 C5DC RSTKB 0017 05DC SNCUL 0788 06F6,0706 SNEND 0790 0743 SNSRY 0780 0648 START 0011 05DC,0604,0643,07A7,07B3,07D3,07DB STFD 0786 0698,0776 STPCH 0784 0670 STRD 0782 068C,06AC,06BC SVKB 0035 05DC TEST 05F8 05ED,0601 TEST1 0601 05FE TEST2 0606 05F9 TEST3 0618 0606,07D7 TIME 09D7 0704,0759,C75E,081F,082A TIMER 06C3 06C,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 MASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882			* - · · ·
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SNEND 0790 0743 SNSRY 0780 0648 START 0011 05DC,0604,0643,07A7,07B3,07D3,07DB STFD 0786 0698,0776 STPCH 0784 0670 STRD 07e2 068C,06AC,06BC SVKB 0035 05DC TEST 05F8 05ED,060D TEST 061 05FE TEST2 0606 05F9 TEST3 0618 0606,07D7 TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06DC,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882	_	0017	05DC
SNSRY 0780 0648 START 0011 05DC,0604,0643,07A7,07B3,07D3,07DB STFD 0786 0698,0776 STPCH 0784 0670 STRD 0722 06BC,06AC,06BC SVKB 0035 05DC TEST 05F8 05ED,060D TEST 05F8 05ED,060D TEST1 0601 05FE TEST2 0606 05F9 TEST3 0618 0606,07D7 TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06DC,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882	SNCUL	0788	06F6,0706
START 0011 05DC,0604,0643,07A7,07B3,07D3,07DB STFD 0786 0698,0776 STPCH 0784 0670 STRD 0782 06BC,06AC,06BC SVKB 0035 05DC TEST 05F8 05ED,060). TEST1 0601 05FE TEST2 0606 05F9 TEST3 0618 0606,07D7 TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06DC,06EB,06F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,087A,0882	SNEND	0790	0743
STFD 0/86 0698,0776 STPCH 0784 0670 STRD 0782 068C,06AC,06BC SVKB 0035 05DC TEST 05F8 05ED,060). TEST1 0601 05FE TEST2 0606 05F9 TEST3 0618 0606,07D7 TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06DC,06EB,06F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,087A,0882	SNSRY	0780	0648
STPCH 0784 0670 STRD 0782 068C,06AC,06BC SVKB 0035 05DC TEST 05F8 05ED,060). TEST1 0601 05FE TEST2 0606 05F9 TEST3 0618 0606,07D7 TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06DC,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882	START	0011	05DC,0604,0643,07A7,07B3,07D3,07DB
STRD 0782 068C,06AC,06BC SVKB 0035 05DC TEST 05F8 05ED,060). TEST1 0601 05FE TEST2 0606 05F9 TEST3 0618 0606,07D7 TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06CC,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882	STFD	0786	0698,0776
SVKB 0035 05DC TEST 05F8 05ED,060). TEST1 0601 05FE TEST2 0606 05F9 TEST3 0618 0606,07D7 TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06DC,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882	STPCH	0784	0670
TEST 05F8 05E0,060). TEST1 0601 05FE TEST2 0606 05F9 TEST3 0618 0606,07D7 TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06DC,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882	STRD	0782	068C,06AC,06BC
TEST1 0601 05FE TEST2 0606 05F9 TEST3 0618 0606,07D7 TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06DC,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882	SVKB	0035	05DC
TEST2 0606 05F9 TEST3 0618 0606,07D7 TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06DC,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882	TEST	05F8	05ED, 060).
TEST3 0618 0606,07D7 TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06DC,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882	TEST1	0601	05FE
TIME 09D7 0704,0759,075E,081F,082A TIMER 06C3 06DC,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882	TEST2	0606	05F 9
TIMER 06C3 06DC,06EB,C6F3,06FD,07F8,080A TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,C87A,0882	TEST3	0618	0606,07D7
TSTER 0710 0812 WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,087A,0882	TIME	09D7	0704,0759,C75E,081F,082A
WASSB 089E 0862,086A,088A WSBCL 08AA 0852,085A,087A,0882	TIMER	06C3	06DC,06EB,C6F3,06FD,07F8,080A
WSBCL 08AA 0852,085A,C87A,0882	TSTER	0710	- ·
The second of th			· · · · · · · · · · · · · · · · · · ·
WTRET 07D6 07C5,C7CE			
	WTRET	0706	07C5,C7CE

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1442 TIMING TEST

PMAX	065C	060E
PMIN	0658	060A
PUNCH	0654	063E
RDATA	0985	06E4,06E6,C6FA,071E,0738,078A,078C,07F2,0800,0804
RDCOL	06DE	0680
READ	0673	0639
READY	0647	064C,0654,0673,068F,069B,06AF
RMAX	0678	0616
RMIN	0674	0612
RQKB	0034	05DC
RQTY	0033	C5DC
RSTKB	0017	05DC
SNCUL	0788	06F6,0706
SNEND	0790	0743
SNSRY	0780	0648
START	0011	05DC,0604,0643,07A7,07B3,07D3,07DB
STFD	0786	0698,0775
STPCH	0784	0670
STRD	0782	068C,06AC,06BC
SVKB	0035	O5DC
TEST	05F8	05ED,060).
TEST1	0601	05FE
TEST2	060 6	05F 9
TEST3	0618	0606,0707
TIME	09D7	0704,0759,075E,081F,082A
TIMER	06C3	06DC,06EB,C6F3,06FD,07F8,080A
TSTER	0710	0812
WASSB	089E	0862,086A,088A
MSBCL	AA80	0852,085A,C87A,0882
WTRET	0706	07C5,C7CE

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